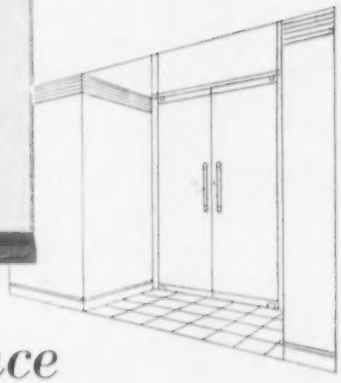
THE ARCHITECT & BUILDING NEWS

28 JANUARY 1954 · VOL 205 · NO. 4 · ONE SHILLING WEEKLY

- CLAY CROSS COUNTY JUNIOR SCHOOL
- PROJECT FOR MOAT MOUNT SECONDARY MODERN SCHOOL, HENDON
- CURRENT MARKET PRICES



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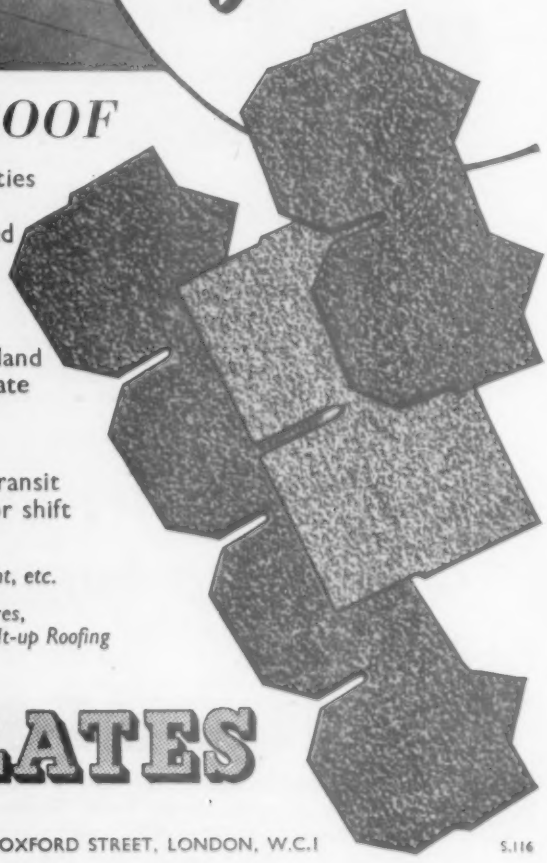

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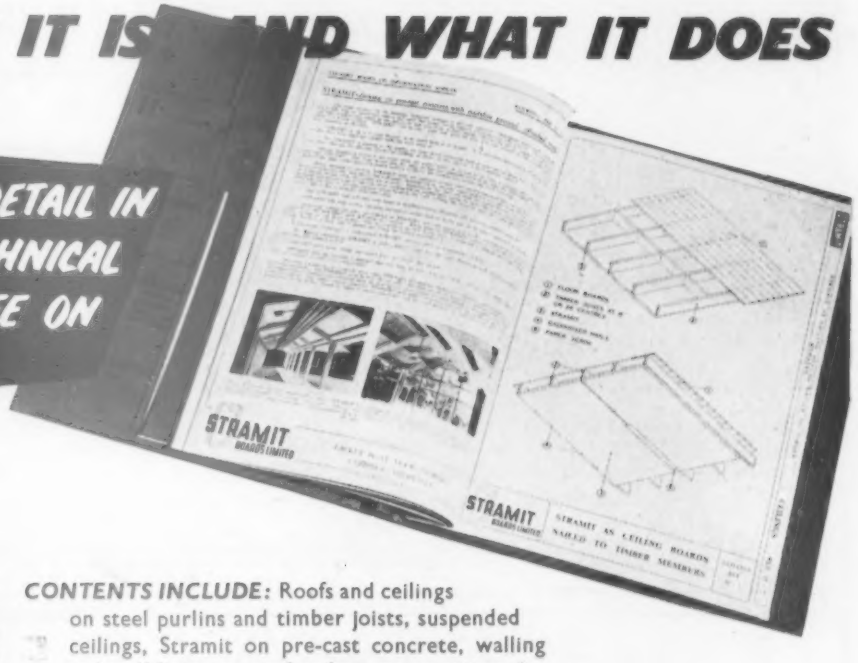

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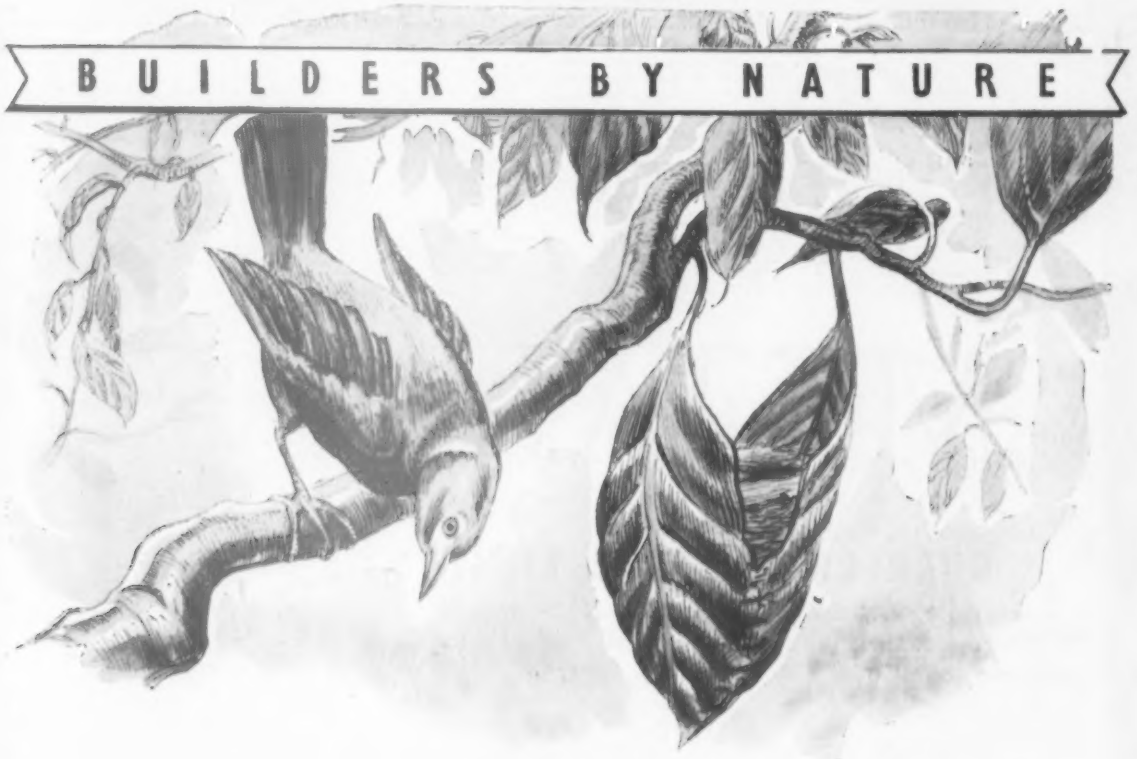

No. 6 · INDIAN TAILOR BIRD

Looking at the nest of an Indian Tailor Bird, it is almost impossible to believe that the careful stitching which holds the nest together has been done by a bird. A close observer, however, will notice that there is no continuity from stitch to stitch. Each one is individually knotted.

The bird uses cobwebs, silk from cocoons, stray lengths of cotton or wool and so on, as its thread. Choosing two or more large leaves it pierces them with its sharp beak, draws the thread through and somehow contrives a knot on the outside so that the thread stays firm.

Once this aerial cradle is completed the nest itself is built in the deep cup thus formed. It is snugly quilted with soft down and cotton-wool, and then lined with horse hair and fine grass stems. The finished nest is both cosy and secure, strung as it is above the ground, sometimes very high up, but usually not higher than 6ft.

Other birds build nests just as intricate as the Tailor Bird, birds such as the Wren-warblers, for instance. Perhaps it is the Tailor Bird's name which has won it so much renown for its finely stitched nest.

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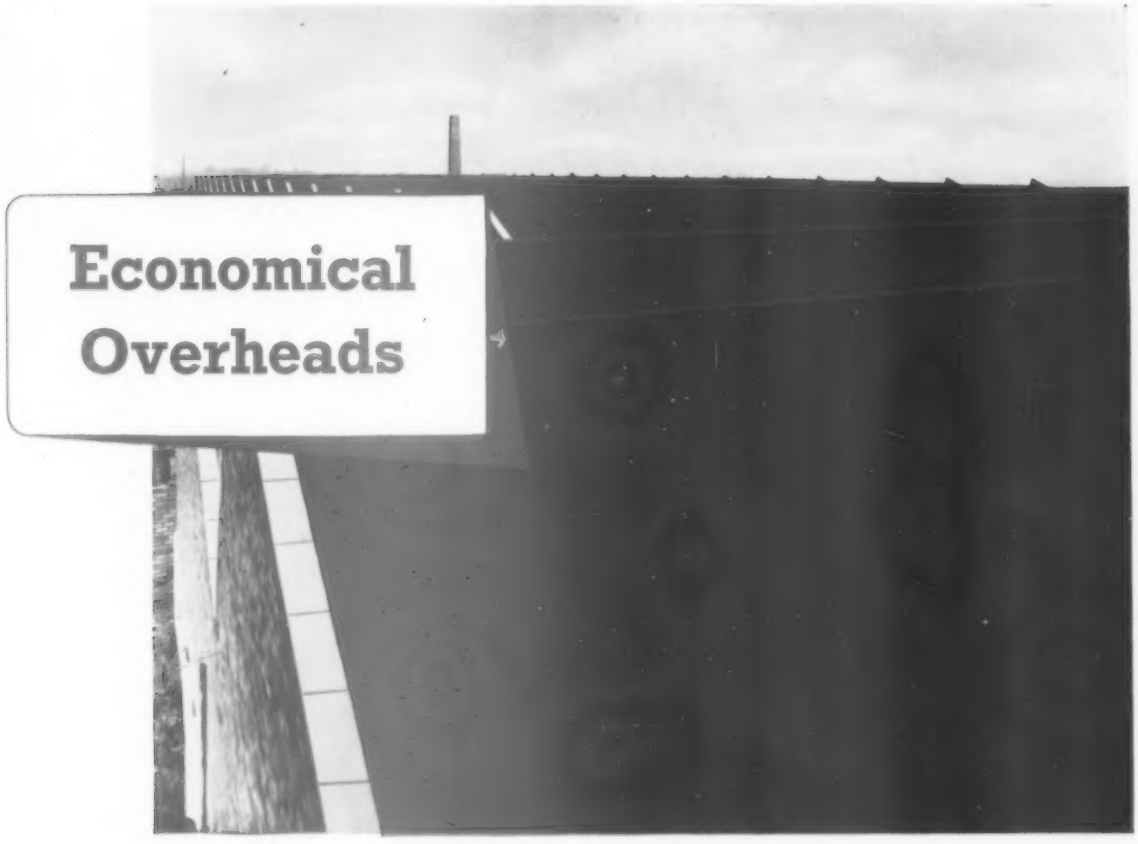

Factory for Lockheed Brake Co., Ltd., Speke, Liverpool, Architect—A. Ernest Shennan, M.A., A.R.I.B.A., roofed with BRIGGS MULTI-LAYER BITUMEN ROOFINGS.

Speed as well as efficiency, are amply demonstrated in the roofing of this huge factory in Liverpool. Here, 20,000 sq. Yds. of Briggs Roofings were completed in the specified time of 10 weeks. The external layer is Briggs Green Mineral Surfaced Roofing comprising an attractive shade of green granules in nature's own colour, permanent and unfading.

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THE ARCHITECT & BUILDING NEWS

28 January 1954

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THE N.F.B.T.E. ANNUAL REPORT

THE National Federation of Building Trades Employers held its Annual General Meeting in London yesterday. In its annual report the N.F.B.T.E. rejoices in the reappearance of adequate supplies of copper, lead, zinc, steel and timber which gives the industry a freedom of choice in materials that it has not enjoyed for years. "The only physical curbs that still remain on further expansion of building activity are, apart from labour, the limited supplies of bricks and, to a lesser extent, of cement and tiles." Gratitude to the Government is expressed for wider scope given to private house-builders which is expected to lead eventually to complete freedom, "from official planning so often dictated by administrative convenience rather than economic necessity which has in the past effectively stifled attempts to attain the levels of efficiency the industry has known to be possible."

It is admitted, however, that the increased liberty to private development increases the responsibility of the private housebuilder to maintain public confidence in the standards of his products, and the N.F.B.T.E. urges every local association to consider this point, and where it has not already been done, to create active committees of registered housebuilders pledged to "Sound Standards." But "there are reports that contractors are finding that tendering is generally becoming keener and, the market for the larger type of house being naturally limited, the housebuilder is now having to concentrate more and more on satisfying progressively the housing needs in the lower income groups . . . the industry is very dependent on Government action and subsidy policy for the maintenance of the high demand at its present level. If the Government were suddenly to curtail its requirements, the Industry would soon find itself trading under conditions it has not known for more than a decade." In other words greater efficiency has got to be encouraged.

The report then refers to the proposed Building Advisory Service the chief purpose of which would be to investigate at the request of individual firms their organization and special problems by teams of trained consultants. The full use of this service, and its hoped-for success, offers the principal means of escape from the problem posed by the need to keep costs down while maintaining high standards in keenly competitive circumstances. But, says the report, the crux of the problem facing house-builders and their clients is the availability of finance. "The outcome of the Government's consultations with the building societies and the local authorities will be awaited with interest." The question of labour relations occupies an important section of the annual report. "Any imprudent increases in building material prices, or in the cost of labour would make higher building costs inevitable and would not only prejudice the efforts of the industry to assist the national economy but would also endanger the livelihood of large numbers of the employers and operatives now engaged in the industry." It is to be hoped that a statesmanlike compromise will be found to enable the operatives to maintain their wages at a level related to the cost of living without at the same time bringing about the danger of the industry pricing itself out of work, for to quote the report once more "Caution and . . . common sense dictate that no effort should be spared to bring about the reduction in costs which alone can assure the increased exports essential to the maintenance of full employment, economic stability and a rising standard of living."

EVENTS AND COMMENTS

ABNER IN SCOTLAND

MY visits to Scotland are, unfortunately, few and far between. When I make them they are usually rushed and confined to seeing very little of Edinburgh and Glasgow in the depth of winter. My last visit was no exception. All the same, it was a tonic. Scotland preserves much of the dignity which we, in our race to keep up, have lost. Policemen in Glasgow are still 6ft high, brass fenders are still polished fit to burst; the waitresses in Edinburgh's magnificent tea shops are polite and homely bodies, and, best of all, there are no pedestrian crossings anywhere. At sale time in Scotland even the food shops join in, although I must confess that I failed to find any shortbread at reduced prices. After a number of visits I have come to like the heavy black Victorian buildings of Glasgow, how cheap and nasty the multiple shops look beside them. Macintosh's School of Art is a fairy palace towering over Sauchiehall Street, its design is still said powerfully to influence those who work in it, and no wonder. The Glasgow Art Club, which has some of the best polished brasswork I have ever seen, was designed by John Keppie of Keppie, Henderson and Gleave, a firm in which Mackintosh was once a partner. It is a pleasant place of mahogany furniture and red silk lamp shades but now almost deserted in the evenings when once, like so many other clubs, it was crowded. I saw there a delightful silver jug engraved with the names of H.M.S. *Ariadne* and Captain Marryat. A small plaque attached to it explained that it had, in fact, belonged to *the* Captain Marryat and was presented to the club by Tom Purvis.

Although one has to search hard for good architecture in Glasgow there is a pleasant Georgian area round the botanical gardens, and in the gardens there are two splendid glasshouses of most unusual design. I wished that I had had time to go inside them. The bulk of Glasgow Victorian development was undistinguished but there is an unusual amount of good cut-out lettering still to be seen on shops and offices. Judging by the number of shops selling them, bannocks, buns, baps, scones, bread and sweets must be the staple diet of the Scots. Shortbread and Edinburgh Rock is, I think, mainly exported. Glasgow Corporation transport trams and buses bear a most disagreeable colour scheme of white, pale green and orange. The Scottish Committee of the C.o.I.D., which has many other problems to solve, might add this to their list.

Scotland still has far more horse-drawn traffic than London and many of the horses wear most decorative collars surmounted with spikes. Glasgow may be dirty, the early morning office fire chimneys belching smoke are an extraordinary sight, it may be in parts ugly, but it is never dull. A great city built on steeply undulating ground cannot be that even when large areas of it are laid out on a grid. The extraordinary cobbled streets leading off Bothwell and Sauchiehall Streets are very dramatic, and, I should think, very dangerous. The steep slopes provide wonderful sites even for second-rate buildings. If you are lucky enough to have a sunny day in Glasgow you will be surprised how often sunshine and black soot will combine to produce a wonderful architectural effect on a building which in the winter,gloom appeared to have no merit.

HOUSING AND FACTORIES

It is sad to record that there is no new building in Glasgow or, for that matter, in Edinburgh, which makes you stop and wonder, unless it be the construction going on at Renfrew airport outside. From the distance it looks as if a small child of the Rome railway station has travelled by air from Tait's Waterloo air terminal. But it is not finished yet. I will draw a veil over the housing which I saw but would like to leave uncovered the nine- or ten-storey flats perched on top of a hill beside the road to Dumbarton. I hope they are well insulated. The house types in use seemed to me to be beyond words dull, and the siting crowded and unimaginative. Complete absence of trees and very little sign of private enterprise gardening did not help. Near Strathleven, however, I did see some well-sited wooden houses on a treed hillside. Scottish Industrial Estates, a Government-sponsored organization set up between the wars to fight the depression, have done a great deal in the development of factory facilities in Scotland. The Strathleven estate is their showpiece and although the standard of architecture of the factories on it is not outstandingly good, the layout and amenities provided for the workers are good. Canteens on all the estates are managed by the company and this in itself is a prodigious undertaking, for there are 19 estates. The extent of the Government's contribution to this scheme can be judged by the rent charged, which on a long lease amounts to 1s 4¼d per square foot. A reasonable commercial rent would be 6s per square foot.

BED AND BREAKFAST £2

Edinburgh readers will by now be seething at the prominence being given to their great rival, but I must keep my travels in chronological order, more or less. I stayed in the Central Hotel, Glasgow, because I knew no better. I do not mind paying the top price for top quality but this place owned and run by British Railways is anything but top quality. I had a room on the fifth floor above a noisy street and a noisier newspaper printing works. The room was adequate and clean, and there was plenty of hot water. I shared a bath with all the other men on the floor. The lift was some 50 yards along a corridor. The bath towel provided was about the size of a bath mat. Perhaps it was a bath mat, in which case I was not provided with a bath towel at all. An inferior dining-car breakfast was served by a waiter who hummed, while the head waiter, who also hummed, greated each newcomer with a pontifical "Good morning to *you*, sir!" as if he were confering some great honour. The toast was abominable, the quantity of cooked food skimpy in the extreme, the coffee thin. Mid-morning coffee, however, was excellent. All these are the familiar marks of a typical third-rate British hotel. In a third-rate hotel one expects to pay a third-rate price, not £2 *a night*. I did not mention that for my money I had a young riot thrown in. This was a mixed affair and took place late at night in the corridor outside my room. I saw the participants in the morning and they appeared to be a troupe of emigrating barrow-boys and their families. Were they paying £2 a night as well?

LANARKSHIRE SCHOOLS

I was told that the Lanarkshire County Council has 27 schools to build and that instead of putting them out to private architects or doing them in their own offices, they are being put out to contractors specializing in prefabricated construction. The idea appears to work this way. The County architect provides the contractor with a sketch plan; this was done at a meeting of a number of contractors. The contractors were not in competition and each had a different school. They were asked to prepare drawings and bills of quantities, based on a specification provided by the county, within three months. To supervise the construction of the schools four surveyors have been appointed, each is in charge of five schools. The Department of Health and the Education Department are said to be in on the scheme. Some of the contractors are well known in England and I met two architects who had already been asked by contractors to act as consultants.

The reason for going about this job in what seems to me to be a seriously cart before the horse manner is said to be to speed up the preliminaries, designing and construction of schools. It will be interesting to see how it works.

SHOTTS BANDSTAND

Readers of the *Radio Times* will be familiar with the name Kirk o' Shotts, for on this eminence stands the Scottish television relay station. Nearby where my train stopped is the small iron mining town of Shotts. My attention was drawn to the southern side of the track away from the town where an obelisk, surrounded by dark green trees and bushes and an iron fence, presided over what was evidently the town recreation ground, a hilly, scrubby piece of country with a small stream running through its valley. There were two rather sloping and muddy football pitches, half a dozen benches set higgledy piggledy and, then, out in the open, miles from anywhere, a delicately charming Victorian bandstand. It made a perfect subject for an Emett drawing.

EDINBURGH SCHOOL OF ARCHITECTURE

I had not realized that the School of Architecture in the Edinburgh College of Art is allied to the Technical College and not to the University. The University degree course in architecture, consisting of a handful of students is presided over by Professor Matthew, who is also the head of the School of Architecture. This is, I should think, a very complicated set-up.

Robert Matthew should make the perfect professor. To begin with he was trained in the school himself and therefore must have the feel of the place. His wide experience at the L.C.C. has given him an insight into the wicked world outside which will last him for the rest of his life, and his opportunities for private practice in Scotland cannot fail to benefit the school as well as himself.

I was most hospitably received and had lunch in the staff dining room, the large window of which frames a splendid view of the castle. The Edinburgh School has in recent years won a number of R.I.B.A. prizes and I was shown some of the students' work, which impressed me by its standard of draughtsmanship and colour sense as well as by the high quality of many of the designs. The schemes tackled seemed to be smaller than I had seen in some other schools and I thought that this was a sensible idea.

PRINCES STREET

Princes Street is often likened to Chowringhee. The only thing they have in common is that they have buildings on only one side. Princes Street is far grander and more dramatic, with its garden and railway-filled chasm, and the castle towering over it. Chowringhee's buildings are perhaps more monumental and the sun is certainly usually brighter but the tree-fringed Maidan is as flat as a chappatti. If you do not see crows picking over the garbage in Princes Street neither do you see concert grand pianos proceeding down it at a fast trot on the heads of eight very much in step coolies. You could hardly see fewer kilts in Chowringhee than I saw in Princes Street. Even allowing for the bright-scarfed university students, Edinburgh's sartorial habits are less bright than Calcutta's. East street had at one time fine shops in it. The same fate is now overtaking both. Chowringhee has lost the remarkable Army and Navy Stores and Princes Street has been invaded by the cheap chain stores with their selfish fascias. Princes Street still retains some dignified shops and perhaps Chowringhee does too, I imagine that rats are no longer to be seen in broad daylight feeding under the tables of the lounge at the Grand Hotel there. Firpo's restaurant has gone, I am told, but the vast tea shops in Princes Street remain. In my day the white-helmeted Calcutta police careered about on motor-cycle combinations. Edinburgh police to-day have the latest Jaguar saloons.

CARLISLE

On my way home I stopped at Carlisle, town of queer pubs and kind architects. It was nearly dark when I arrived but I did some sightseeing nevertheless. Have you ever seen a cathedral for the first time at night? It is an experience to be tried. I went to Carlisle cathedral with one of the kind architects just as the evening service was ending. The effect was tremendous. The scarlet and white robed choristers and the clergy, spotlighted in a great, dark cavern of which the structure could only dimly be seen, made a picture which I shall not forget for a long time. The cathedral has transepts and chancel only. The Norman nave was burned out in a border affray and Georgian houses stand on its site. It was evidently intended that the nave should be rebuilt as the later chancel is set considerably off centre from the axis of the nave arch.

A MOVING PULPIT AND STOLID PUBS

We also visited the town church, St. Cuthbert's, a fine Georgian building with a gallery. Principal feature of this church is the pulpit which runs on rails and is parked under one side of the gallery. Just before the sermon a handle is turned and the pulpit moves out from under the gallery and takes up its position at the head of the main aisle. It is still in regular use. We tried it.

There are, I believe, only three private licensed premises in Carlisle. We visited them all. The remainder are State pubs. We visited some of them, too. Even allowing for local prejudice they do seem to be rather queer. One was just like the inside of a public lavatory and another, only recently finished, was like the most genteel of drawing-rooms except that the customers kept their hats on. Vertical drinking is usually discouraged and the barmaids wear long white coats. It may have been my imagination but the drinks seemed to be served rather as if the landlord thought they were poison and hoped that we would not need any more. To make up

The new president of the L.M.B.A., Mr. R. S. Williams talking to Sir David Eccles at the L.M.B.A. Annual Luncheon.

for the lack of genial pubs in Carlisle there are a great number of clubs. I cannot remember whether in the end it was decided that the new towns should have State or private pubs. If they are to be State owned I can predict the formation of a lot of clubs. I believe that for all their alleged unpopularity the Carlisle State pubs made a profit of nearly a quarter of a million pounds last year.

I travelled both to and from Scotland in sleepers panelled with plastic sheeting. Even if I knew which brand of sheeting it was I would not dare to mention it here for I do not like it at all used for this purpose. It is hard and unsympathetic, and in spite of all the maker's assurances it does become shabby, and then there is apparently nothing you can do about it. I am delighted to hear from an agent that new B.R. sleepers will be lined with timber and, furthermore, that they are being designed by architects. Which reminds me that in Edinburgh I met an engineer who staffs his office entirely with architects.

THE GODS AT OLYMPIA

The *Daily Mail* Ideal Home Exhibition this year is flying high with Phœbus and his 16 winged-horse drawn chariot as a main feature at one end and the goddess of the moon pursued by day at the other. In between there will be Arcadia, and the usual stands, flanking a great deal of carpet on a foamed rubber underlay. Sir Hugh Casson is the designer, in association with Robin and Christopher Ironside—you will remember their fine cast aluminium feature at the end of Whitehall during the Coronation and their Time-Life Clock.

L.M.B.A. ANNUAL LUNCH

The Minister of Works rose from his sick bed to attend and speak at the annual lunch of the London Master Builders' Association last week. He was warmly received and gave some cheering news about licensing. The guests included the officials from the Ministry of Works, other building organizations, editors of architectural and building papers and representatives of the national Press.

A NEW SHOW OF WALLPAPERS AND FABRICS

Messrs. Arthur Sanderson & Sons have always given a lush setting to their wares. Their new show, which opened last week, is no exception. Papers, fabrics, furniture, ornaments and light fittings are arranged in a series of little bays, and these are very well done. The central feature rather misses the boat, I think, through not being sufficiently highly finished nor dramatically lighted. There are some pleasantly furnished rooms no better and no worse than many more we have seen in the past few years, but there are a number of pretty new wallpapers and fabrics which are well worth seeing.

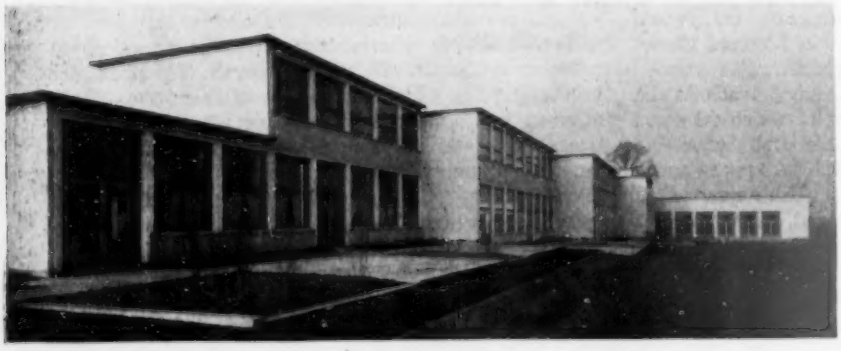
NEW LIGHT FITTINGS, NEW DECOR

Troughton and Young Lighting, Ltd., are the doyens of the modern light-fitting manufacturers, and for half of last week they were at home to architects, engineers and industrial designers in their newly decorated showrooms full of new fittings. Terence Conran was responsible for the very pleasant décor which owes, perhaps, a shade too much to *Domus*. Some of the new fittings are very pretty, but rather too much has been made of the diabolo shape. This gives the impression that designers have run out of ideas for new shapes. One thing is quite certain, however, and that is that T. and Y. fittings are a great deal better made than most.

DRESS SUIT OR DRESSING GOWN?

Some weeks ago I asked why Leonard Stokes' presidential portrait showed him in a dressing-gown. Edwin Gunn, faithful pen friend and reader, has supplied the answer. Stokes was a great joker. When Orpen and Stokes met, Orpen said: "Well, is it to be dress suit or dressing-gown?" Mr. Gunn was an associate member of the R.I.B.A. council when the portrait arrived, and that was the current story. One member then suggested that it should be hung in the lavatory.

ABNER



Gray's Farm Junior School, St. Paul's Cray.

CORRECTIONS

On page 71 of last week's issue, the houses at Woodton, Norfolk, are for Loddon R.D.C. and the architects, Messrs. Tayler and Green. On page 64, G. Longden & Son Ltd., are the General Contractors for the B.I.S.R.A. Laboratories. On page 88, Messrs. J. M. Wilson, H. C. Mason & Partners are the architects for the Car Ferry Terminal, Dover.

Gray's Farm Junior School, St. Paul's Cray. The acknowledgement on page 80 of last week's issue was incorrect. The architects are Messrs. Scott and Westmoreland in collaboration with S. H. Loweth, Kent County Architect. General Contractors: E. H. Smith (Croydon) Ltd.

NEWS OF THE WEEK

Fire Research and the Architect

During the period February 10-26, an exhibition dealing with the work of the Fire Research Station, Elstree, will be on view at the Royal Institute of British Architects, 66, Portland Place, W.1. The exhibition has been prepared by the Joint Fire Research Organisation, which is run by the Department of Scientific and Industrial Research and the Fire Offices Committee. It is concerned with investigating the causes of fires, the way in which they spread, and the efficiency of fire-fighting methods and equipment. For many years an important part of its work has been the testing of elements of structure for fire resistance.

The Station receives considerable guidance in deciding lines of research which may profitably be followed as a result of its work on compiling the fire statistics of this country. One of the exhibits in the exhibition deals with this part of the work.

Other subjects covered by the exhibition include the testing of wood, wall-boards, textiles, etc.

An interesting discovery in fire research practice has been the development at the Station of satisfactory methods of carrying out research into the spread of fire and flames by using model rooms and buildings. Hitherto full-scale tests were necessary, and these, being destructive and costly, the number of tests which could be made was limited.

Exhibits of particular interest illustrate the work done at the Station on the fire resistance of walls, floors, columns and beams of various types. The components are furnace-tested to destruction, and the results of the tests are made available to manufacturers, designers, architects and others interested in the behaviour of structural elements when exposed to high temperatures.

A great deal of valuable work has been done recently on the fire resistance of prestressed concrete beams and columns. Until recently little was known about the behaviour of these units when subjected to fire. Fire tests on full-scale beams gave valuable information about the effects of fire on these components and made it possible to determine their grade of fire resistance.

The exhibition also illustrates the behaviour of smouldering materials in causing fires and shows work on the problems of fire fighting. A section dealing with burning liquids illustrates the use of water sprays with carefully controlled drop sizes and the use of foam solutions for smothering fires in highly inflammable liquids.

The exhibition will be on view from 10-7 Mondays-Fridays, and from 10-5 on Saturdays. Admission is free.

Perspective of the new Liverpool Corporation Health and Welfare office building which it is expected will be completed in eighteen months at a cost of about £100,000. The steel framework has been standing since 1939. Dr. Ronald Bradbury, F.R.I.B.A., A.M.T.P.I., City Architect, Liverpool.

R.A.C. Memorial

In the second stage of the competition organized by the Royal Society of Sculptors for a memorial in London to the Royal Armoured Corps, three designs were submitted by : A. E. Sean Crampton, M.C., G.M. ; Wilfred Dudeney, F.R.B.S., and G. H. Palin, F.R.B.S. The Committee of Assessors has selected Mr. Crampton's design as the winner. The three models will be on view at the R.I.B.A. from Feb. 10-20.

Use of Tower Crane for House Building

A special course of three weekly lectures will be held at the L.C.C. Brixton School of Building, Ferndale Road, S.W.4, commencing on Tuesday, 2nd February, at 6.30 p.m. The lecturers will be N. S. Pippard, J. F. Eden, B.Sc., A.M.I.Mech.E., and H. F. Broughton. The fee for the course is £1, and applicants should apply to the Secretary at the School giving name of firm, position held and qualifications.

R.I.B.A. Travelling Exhibition

"Home & Surroundings" will be shown at the following centres: February 9-20: Messrs. Eve & Ranshawe, Louth, Lincs. Feb. 8-20: The County Museum, Church St., Aylesbury. Feb. 25-March 13: The Art Gallery, Sheffield.

CHANGES OF TELEPHONE NUMBERS

J. M. Austin-Smith and Partner, Chartered Architects, 29, Sackville Street, London, W.1, announce that their telephone number has been changed to Regent 6183-4-5.

Oliver E. Steer, A.R.I.B.A., A.M.T.P.I., announces that his telephone number is now Foots Cray 3166-7.

COMING EVENTS

The Art Workers' Guild

January 29 at 7.15 p.m. J. Brandon-Jones, A.R.I.B.A., will speak on "Building with Common Sense, The Influence of Philip Webb," at 6, Queen Square, Bloomsbury, W.C.1.

The Institution of Sanitary Engineers

February 2 at 6 p.m. Discussion on new Code of Practice: "Soil and Waste Pipes Above Ground," to be opened by Messrs. C. L. Langshaw, A.R.I.C.S., F.I.San.E., and J. B. Escritt, A.M.I.C.E., F.G.S., F.I.San.E, at Caxton Hall, Westminster, SW.1.

Royal Institute of British Architects

February 2 at 6 p.m. President's Address to Students. Criticism of work submitted for prizes and Studentships, by Basil Spence, O.B.E., A.R.A., A.R.S.A., F.R.I.B.A., at 66, Portland Place, W.1.

The Architectural Association

February 3 at 6.15 p.m. Talk on "American Agricultural Buildings," by F. H. Holder, Chief Architect, Ministry of Agriculture and Fisheries, at 34, Bedford Square, W.C.1.

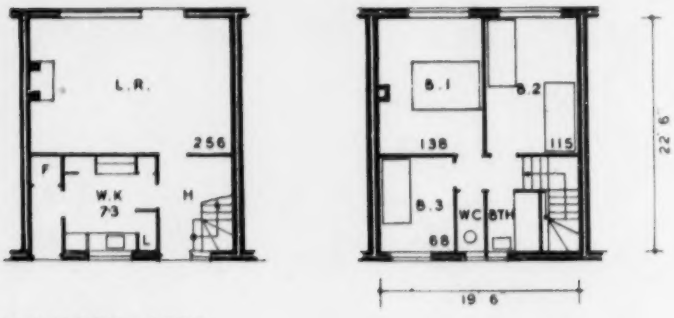
Royal Society of Arts

February 3 at 2.30 p.m. Talk on "The Evolution of Public Health Engineering," by F. E. Bruce, M.Sc., S.M., A.M.I.C.E., Reader in Public Health Engineering, Imperial College of Science and Technology, at John Adam Street, Adelphi, W.C.2.

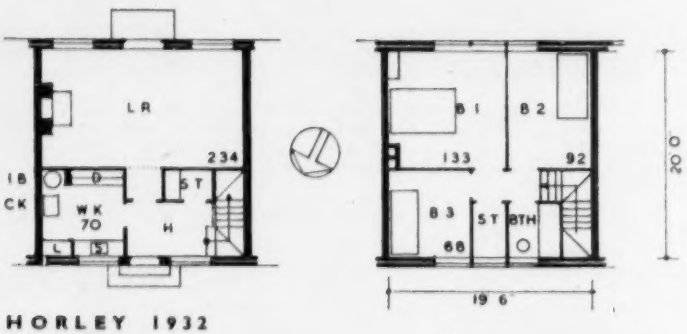
Town Planning Institute

February 4 at 6 p.m. Talk on "The Planners and the Planned—Equity and the Citizen," by The Rt. Hon. Lord Justice Denning, at The Livingstone Hall, Broadway, Westminster, S.W.1.

C O R R E S P O N D E N C E



HOUSES 1953



HORLEY 1932

Houses 1953

To the Editor of A. & B.N.

SIR,—I am extremely interested in Mr. Tayler's review of "Houses 1953," January 14 issue. Some twenty years ago you illustrated a row of small houses I did at Horley, and from the enclosed print you will see how very little the Ministry plan for a similar house differs from mine, which, by the way, cost £50 each.

I am, etc.,
P. EVANS PALMER.

[A number of other readers have written to express their appreciation of Mr. Tayler's article.—ED., *A. & B.N.*]

R.I.B.A. Dinner

To the Editor of A. & B.N.

Sir,—Congratulations upon the protest, made again this year, against the holding of the R.I.B.A. banquet at an hotel.

I will not try to better the arguments of "Abner" which were excellently put, but am writing to make two suggestions which could offer a solution in future years.

1. If the Florence Hall is too small, why not increase it nearly 50 per cent by erecting a demountable extension on the adjoining terrace. The Institute might even offer a small prize for the design of this feature which could be used for many years and pay for its cost by saving the rental of a special banqueting room.

2. Alternatively, couple the reception and banquet as two complementary parts of the Institute's annual hospitality and allow members, excepting the Council, to attend only one of these functions. A combined application form by which members could indicate first and second choice and proposed guests would serve to deal with this.

I am, etc.,
KEITH AITKEN.

To the Editor of A. & B.N.

Sir,—Your readers may be interested to know of an Exhibition of Photographs to be held by my Club on the evening of Friday, February 12, 1954.

The Exhibition is at the Town Hall, Friern Barnet, N.11, and consists of monochrome and colour prints and colour transparencies of pictorial and architectural subjects; in this latter category we have historical and contemporary buildings both in Britain and overseas, including many country houses visited by our members over a number of years.

I am, etc.,
D. J. CANNON,
Hon. Organizing Secretary,
Finchley & Highgate Section
Cyclists' Touring Club.

Full-scale Building Research Trials

At the Research Conference organized by the National Federation in March, 1953, Sir Ben Lockspeiser, Secretary of the Department of Scientific and Industrial Research, spoke of the need for full-scale trials under working conditions which was frequently experienced in connection with the development of research work. He suggested that the N.F.B.T.E. might be able to arrange facilities for much more systematic and broadly based trials than was possible at present. Steps to give practical effect to this suggestion were considered at a meeting of the Federation's Building Research and Technical Information Committee held at the Building Research Station at Garston in December.

At this meeting a possible scheme in which building firms could co-operate with the Building Research Station in determining the practicability of new materials or processes under actual working conditions was outlined by officers of the Station. The Committee expressed themselves wholeheartedly in favour of the idea and a small sub-committee was appointed to work out the details of the scheme, to select members of the Federation who would be both able and willing to carry out the experiments, and to act as liaison between the Building Research Station and the individual member during the actual course of the experiments.

The following have been suggested as possible subjects for full-scale trials:—

1. Air-entrained mortars for rendering.
2. Zinc oxychloride treatments for walls infected with dry rot.
3. Lime-tar damp-proof course for solid ground floors.
4. Various methods of reducing deterioration of domestic boiler flues, to be adopted during repair of existing flues or construction of new ones.
5. Methods of renovating old houses:—
   (a) Plastering and decorating on damp walls;
   (b) Other matters as they arise.
6. The construction of houses of unrendered lightweight concrete blocks.

Experiments on each of these matters have already been carried to an advanced stage at the Building Research Station and certain practical points of detail remain to be investigated. It is intended that the list should be expanded from time to time as circumstances permit and that builders should themselves suggest new items arising out of their practical experiences. The results of each experiment will be made generally available.

The N.F.B.T.E. Council has given its approval to the arrangements described and the Building Research and Technical Information Committee has been asked to proceed with the scheme.

Clay Cross County Junior School, Derbyshire

ARCHITECT :
J. W. M. DUDDING
F.R.I.B.A., A.I.L.A.

in association with
F. HAMER CROSSLEY
Dipl.Arch.(L'pool.), F.R.I.B.A.
COUNTY ARCHITECT

ASSISTANTS :
GORDON GRAHAM
R. MAURER
R. JOWETT

LANDSCAPE :
PATRICIA ATKINSON
Dipl.Hort., A.I.L.A.

QUANTITY SURVEYORS :
JOHN C. BARNSLEY, F.R.I.C.S.

CLERK OF WORKS :
GEORGE WHYMAN

GENERAL CONTRACTORS :
MORLEYS (BUILDERS) LTD.

THIS school was planned for 320 Juniors, but is at present occupied by 160 Juniors and 160 Infants. The dining-room and kitchen are designed to cater also for 200 Infants from a future school on the adjoining site. When this is built, the school illustrated will revert to its original purpose. For the present, Juniors are on the first floor and Infants in the one-storey wing.

Site

The site was a meadow which has required extensive land drainage. Owing to its shape it was necessary to orientate wrongly the grass playing pitches, although this is not a serious matter in a Primary School. In order to maintain the rural appearance the hedge along the road frontage has been preserved and "laid" in lieu of fencing. This will not be allowed to exceed 2ft 6in in height, for motor traffic visibility.

Construction

In order to give contrast in external colour and texture, brindle facing bricks have been introduced in the lower storey to contrast with the Derbyshire Spar-faced concrete slabs, which are fixed to steel "Presweld" frame on an 8ft 3in module. Internal metal stanchion covers normal to this form of construction have not been used, the stanchions having been plastered on expanded metal. Inner skins to external walls and internal partitions are of plastered foamed-slag blocks. Roof insulation is by vermiculite screed. Flooring to teaching spaces is of cork tiles with thermo plastic tiles in circulation spaces and dining-room. Floor to assembly hall is of Japanese oak strip; to kitchen, quarry tiles.

Plan

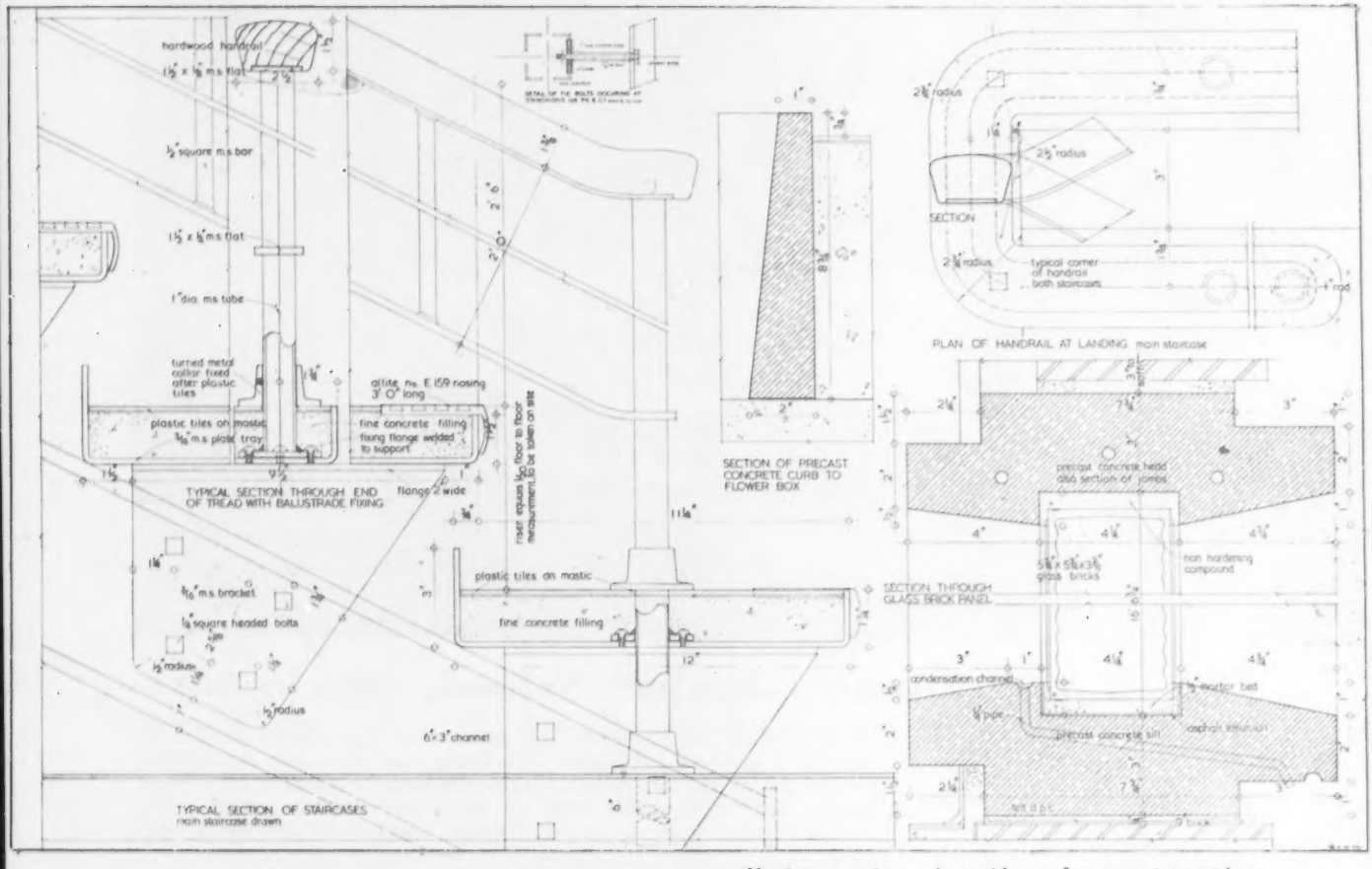
To avoid cross-lighting difficulties arising from superimposed classrooms, the ground floor of the two-storey portion consists of administrative and staff rooms. Since the area required below was less than that required above, the lower storey (brick) walls have been set back off the grid, with special metal trim to the overhanging upper storey.

Teaching spaces and staff rooms face south and south-east, looking over farm lands to the Derbyshire hills.

SUBCONTRACTORS AND SUPPLIERS

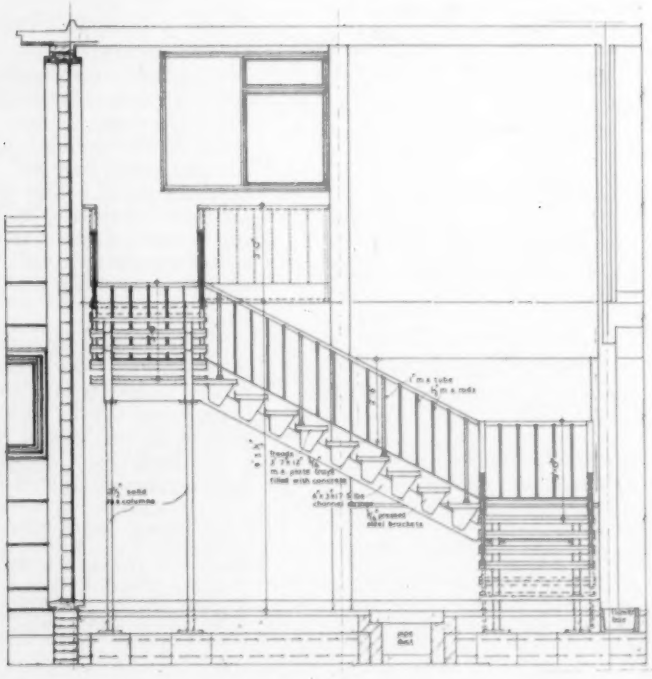
Steel-frame, metal windows, roof lights and external cladding: Hills (West Bromwich), Ltd. *Bricks:* Charnwood Brickworks, Shepshed. *Heating and H.W.:* Weatherfoil Heating Systems, Ltd. *Electrical:* W. H. Burton, Chesterfield. *Roofing:* Northern Asphalte Co., Ltd. *Boiler housing proofing:* Briggs Aqualite. *Flooring: Accotiles and cork:* Rowan and Boden, Ltd.; *Hardwood:* J. A. Hewetson & Co., Ltd. *Metal internal door frames:* Williams & Williams, Ltd. *Flush doors:* Leaderflush, Ltd. *W.C. partitions:* Flexo Plywood Industries, Ltd. *Roller shutters:* Wat Simmons,

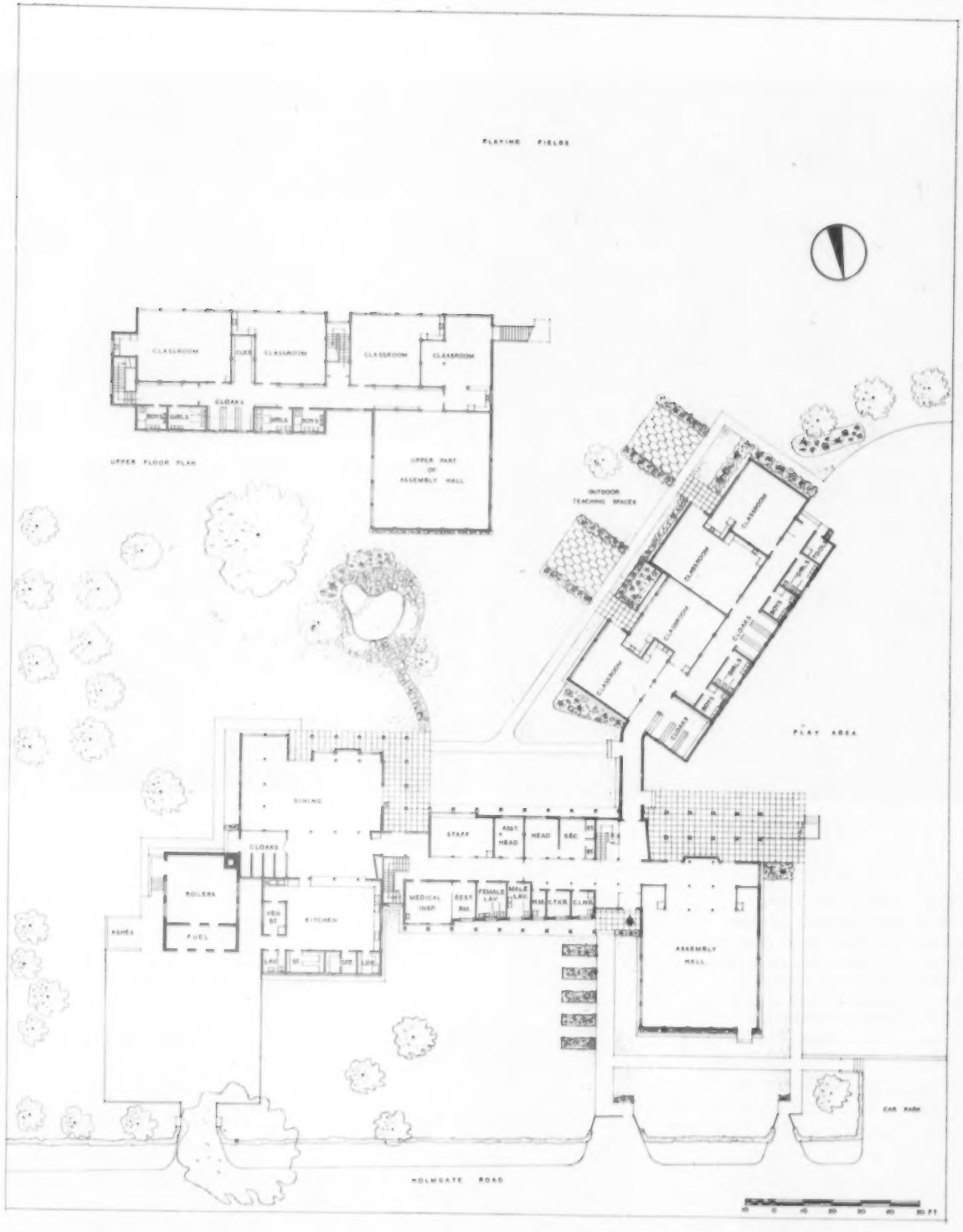
[Continued on page 112



Main stair: details of construction

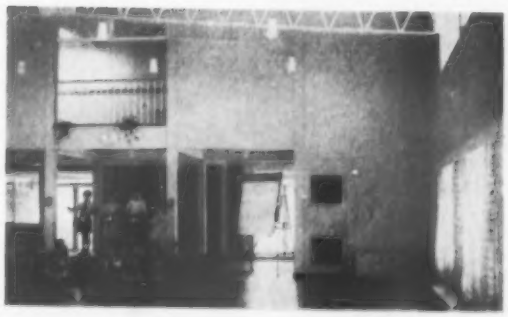
Stair by Dining Hall

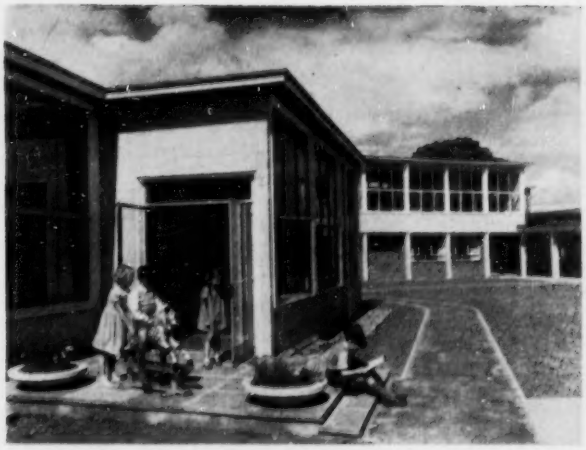




North Elevation from road

The Assembly Hall





CLAYCROSS COUNTY JUNIOR SCHOOL

Top L: *Infants' classrooms.*

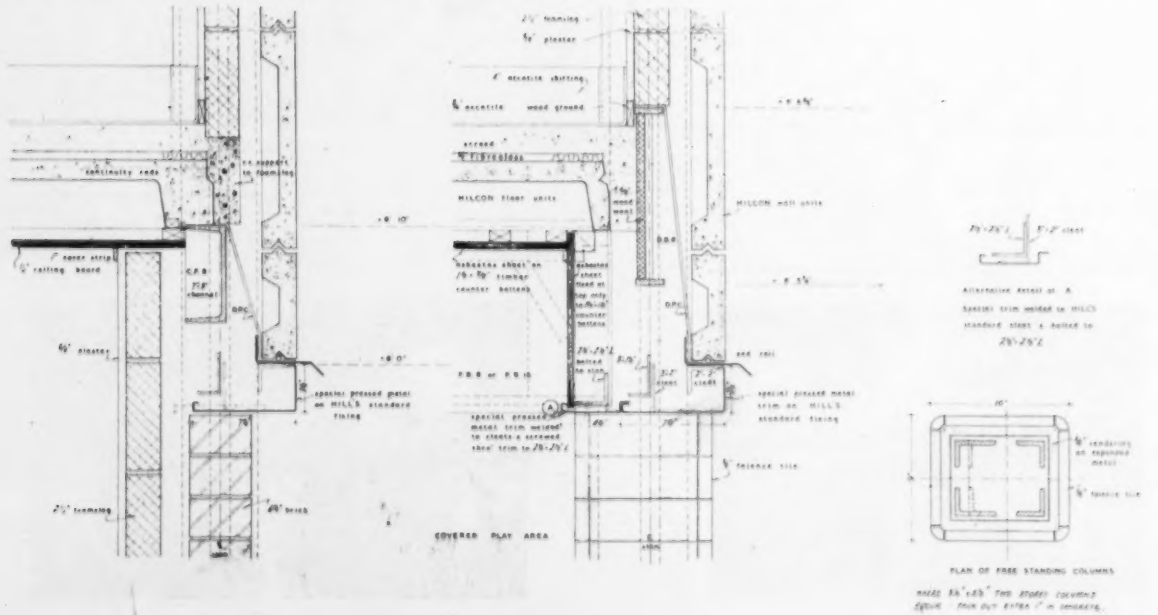
Top R: *Main entrance at night.*

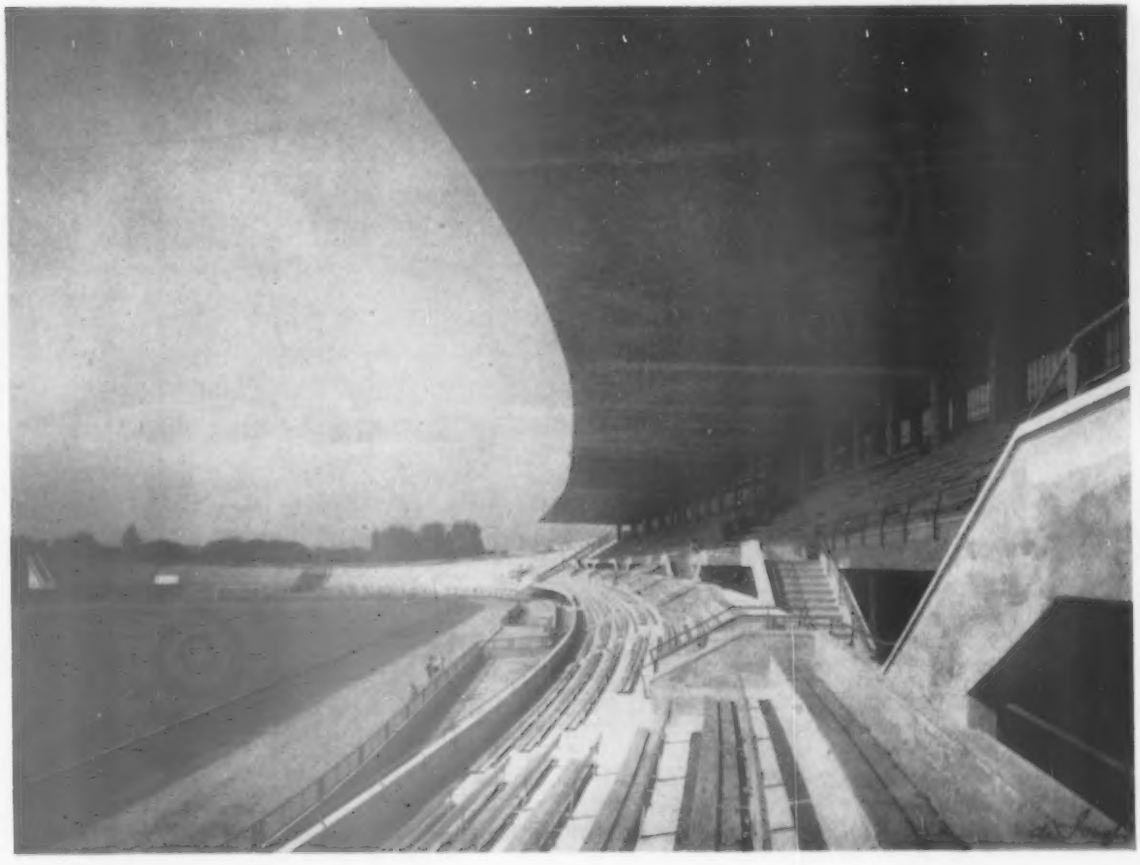
Bottom L: *View from playground.*

Bottom R: *Junior classrooms, upper storey and escape stair.*

Below: *Details of trim at first floor level. Scale 1in equals 1ft.*

Nottingham. *Smoke doors, entrance door and screen:* Rustproof Metal Window Co., Ltd. *Art. Stone:* G. A. Sanderson (Concrete), Ltd., Sutton Bonington, Notts. *Tiling:* Carter & Co. (London), Ltd. *Cloakroom fittings:* Mountford Bros., Ltd. *Sanitary fittings:* Adamsez, Ltd. *Kitchen extract domes and baffles:* G.E.C., Ltd. *Metal cowling:* Canal Sheet Metal Works, Ltd., Nottingham. *Fibrous plaster:* W. J. Wilson & Son of Mansfield. *Door furniture; soap dispensers and lettering:* Dryad Metalworks. *Steel staircases, balustrades, entrance gates:* Metalcraft (Nottm.), Ltd. *Landscape gardening:* J. W. Boddy & Co., Chaddesden, Derbyshire. *Playing-field construction:* Bradshaw Bros. (Contractors), Ltd. *Venetian blinds:* J. Avery & Co. *Water heaters:* Aidas Electric, Ltd. *Thermal insulation:* Dohm Vermiculite. *Sound proofing:* Pilkington's Fibreglass. *Fire equipment:* L. & G. Fire Appliance Co., Ltd. *Door mats:* Institute for the Blind. *Paint manufacturers:* Joseph Mason & Co., Ltd. *Wallpaper:* John Line & Sons, Ltd.





A NEW STADIUM AT LAUSANNE: SWITZERLAND

Architect: C. F. THEVENAZ Engineers: E. THEVENAZ and P. JACCARD

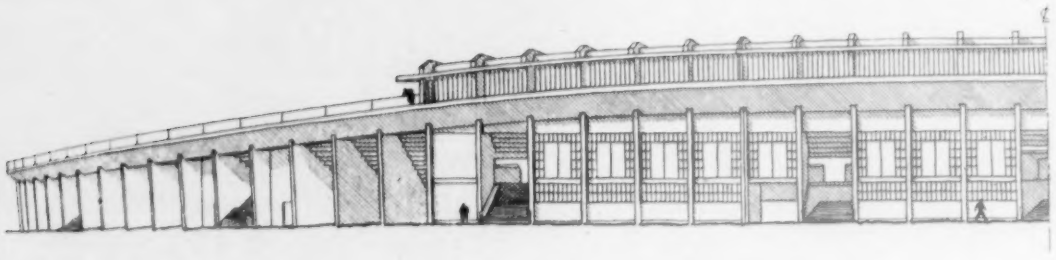
Aerial view

THE sports ground at Lausanne, Switzerland, is dominated by a new reinforced concrete stadium with two grandstands on opposite sides of an elliptical arena. The layout of the sports ground as a whole contains pitches for nearly every sport played on the ground, including a banked cycle track in the North-Western corner, ten tennis courts, and football, hockey and basketball pitches.

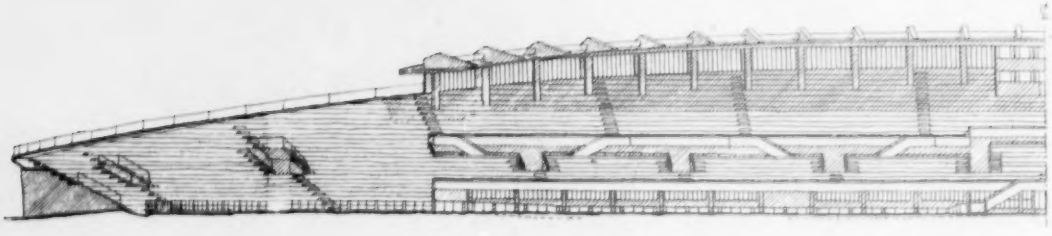
The principal points of interest in the new stadium are the massive cantilevered reinforced concrete roofs over the grandstand. The stadium as a whole has been designed to take between 50,000 and 60,000 people at

LAUSANNE STADIUM

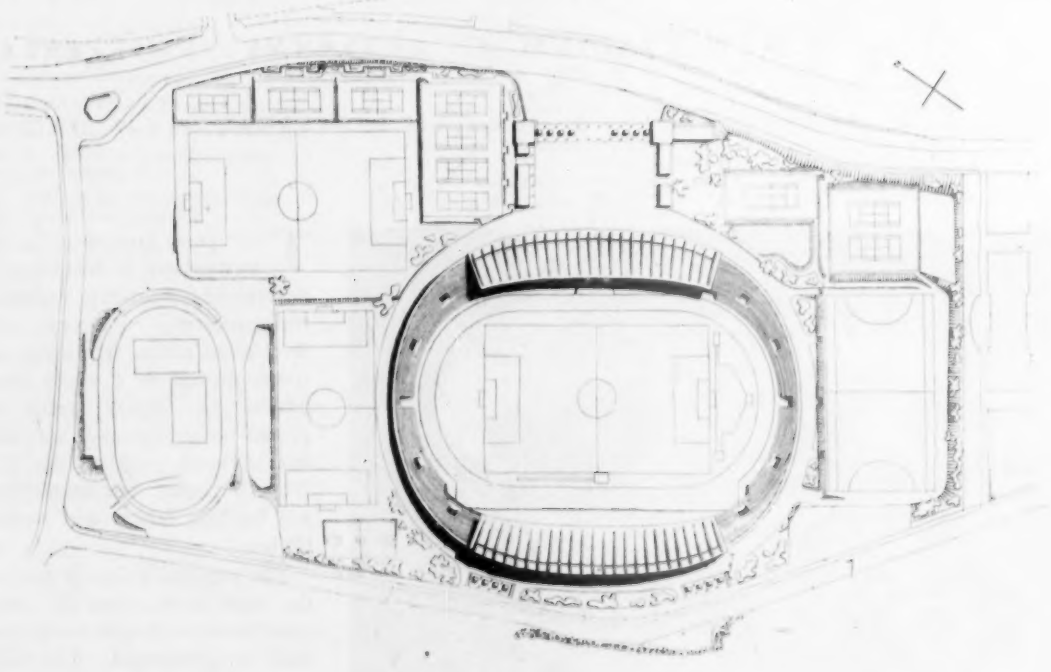
ELEVATIONS. SCALE: ONE INCH REPRESENTS APPROXIMATELY SIXTY-FOUR FEET



HALF EXTERIOR, LONG SIDE



HALF INTERIOR LONG SIDE



SITE PLAN. SCALE: ONE INCH REPRESENTS APPROXIMATELY 264 FEET

Above: Looking across the vast arena to the East.

Left: A close-up of the main structure. The rough finish left by the shuttering is clearly visible.

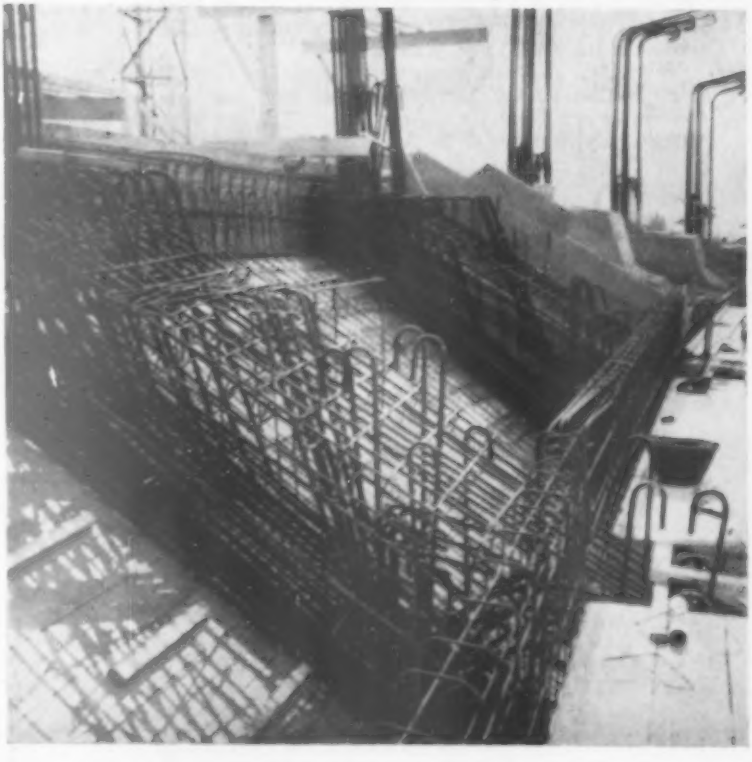
Below: A section of the Grandstand before pouring the concrete. The complexity of the reinforcement can be appreciated. The vertical reinforcement is for the columns which will support the canopy. In the background can be seen the gantry of one of the two giant mobile tower cranes used on this job.

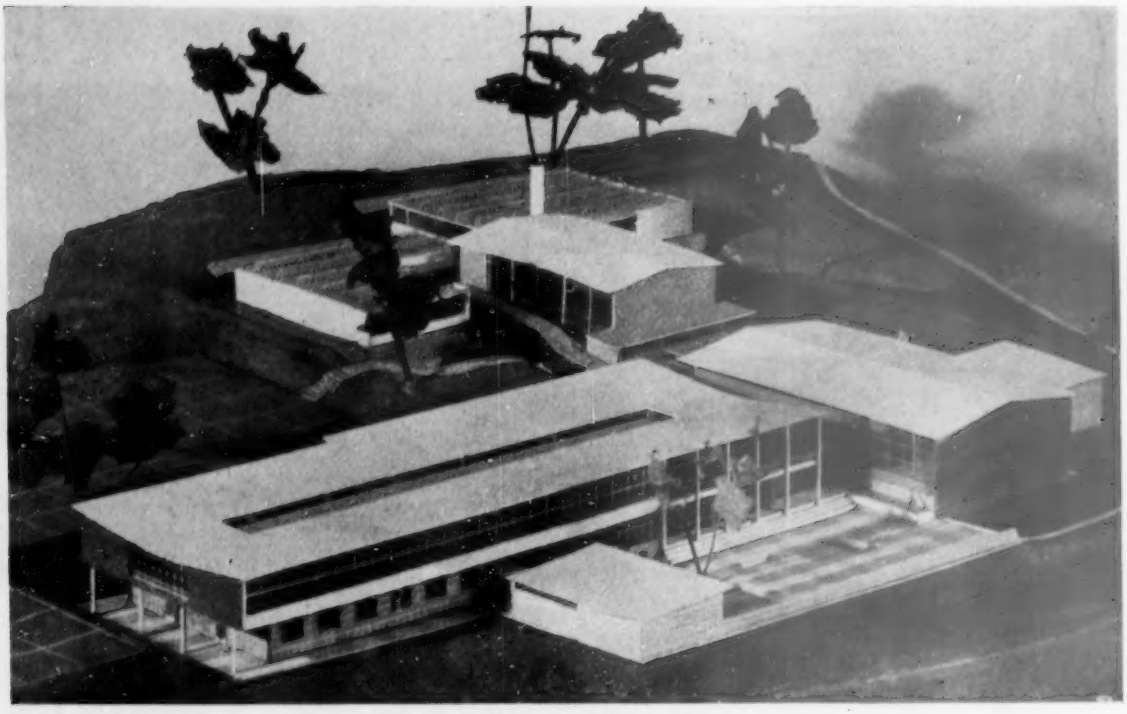
one time. Of that number 16,000 can be under cover, 4,000 of them seated.

In order to preserve an uninterrupted field of view for the maximum number of spectators, the supporting columns have been placed as far as possible to the rear of the stands. These columns are spaced at 16ft centres and carry an estimated load of 192 tons.

The maximum projection of the canopy, which, incidentally, is doubly curved, is 60ft. In order to reduce the dead-weight on the columns the infilling slab is a reinforced concrete shell 3in thick. Lateral stiffening is provided by an upstand beam over the inner column.

The uncovered stands are split into 16ft by 17ft bays by the load-bearing walls, all foundations were taken down to a natural sandstone bed. Expansion joints were provided that will allow horizontal movement.





The model made in the department

PROJECT FOR MOAT MOUNT SECONDARY SCHOOL, HENDON

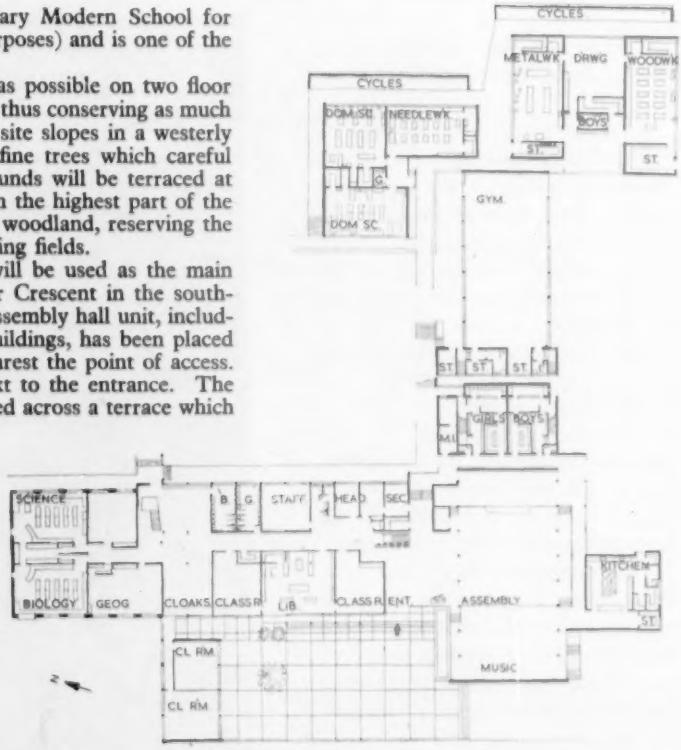
C. G. STILLMAN, F.R.I.B.A., County Architect

L. T. CHANNING, A.R.I.B.A., Job Architect

THE project is a Four-Form Entry Secondary Modern School for 600 boys and girls (680 pupils for cost purposes) and is one of the schools of the 1954-55 programme.

The school has been planned as compactly as possible on two floor levels with two staircases for ease of circulation, thus conserving as much as possible of the site for playing fields. The site slopes in a westerly direction and consists of 20 acres with some fine trees which careful planning will preserve. Buildings and playgrounds will be terraced at different levels. The school is to be erected on the highest part of the site, which is screened on the east by a belt of woodland, reserving the more level part of the site to the west for playing fields.

The access to this part of the site, which will be used as the main one for vehicles and pupils, is from Worcester Crescent in the south-east corner; hence, for compact planning, the assembly hall unit, including the service to the kitchen and workshop buildings, has been placed at the south end of the group of buildings, nearest the point of access. The schoolkeeper's house has been placed next to the entrance. The main approach to the building has been arranged across a terrace which



SKETCH PLAN OF THE PROPOSED SCHOOL. THE AREA COVERED BY THE PLAN ON THE GROUND FALLS FORTY FEET FROM EAST TO WEST ACCESS TO THE SITE IS FROM THE EASTERN CORNER.

SCALE: 80FT TO 1IN

PERSPECTIVE SKETCHES OF THE PROPOSED SCHOOL. RIGHT: FROM THE SOUTH, BELOW: FROM THE NORTH-WEST.

is open to the west and extensive views, the main entrance hall being the hub of the school circulation, between the assembly unit and the classroom wing. Administration rooms are on the ground floor next to the entrance hall and one of the staircases.

In accordance with educational needs the teaching accommodation has been grouped as follows : the science, biology (preparation room serving each between) and geography rooms are together at the end of the teaching block on the ground floor. The library and two classrooms, in a central position on the ground floor, open on to the terrace, which is enclosed by two more classrooms on the north side, forming a useful open-air concourse for library study. Benches, for informal arrangement, will be provided.

The art and craft rooms and two classrooms are grouped on the first floor with access to a balcony, which assists circulation between these rooms. The balcony has been provided for use in conjunction with the art room, which looks over the view.

The housecraft and needlework rooms are in a self-contained unit. Metalwork, woodwork and practical drawing-rooms are also self-contained, with an activity space serving as access to each unit. In each of these entrance spaces display cases will be arranged. These two groups are linked with the entrance hall of the main building by a covered way. The remaining classrooms are arranged in the double-banked wing on the first floor, with a wide circulation space in the centre. These classrooms are clerestory lit and ventilated.

The entrance hall, assembly hall and music room are planned together as a group, and as the assembly hall is used as a second gymnasium, changing rooms are placed between it and the gymnasium to serve both. As the music room has been designed as an extension to the assembly hall the music-room floor level has been raised above the assembly hall floor and linked with the stage on one level by means of a gallery along the side of the assembly hall. This gives the possibility of a variety of uses to the assembly hall for informal drama activity. The kitchen, with a servery approach, has been planned so that the music room and gallery can be used for dining. The cloaks and lavatories are near the access to playgrounds on the ground floor, with additional lavatories on the first floor.

The building has been designed as a light welded steel-framed structure (based on a 12ft grid), using box stanchions and R. S. J.s, the roof being formed of T-purlins supporting strawboard decking covered with copper, a portal frame being used for the classroom wing, open welded trusses for the assembly hall and gymnasium and space frames for the handicraft units. Internal partitions will be of lightweight concrete blocks, and suspended floors will be of pre-cast units.

The steel frame will be sprayed with rendering to give half an hour's fire risk. The beams of the structure will be covered on the underside of the first floor with a false ceiling, providing concealed runs for services. Beams on the first floor will be upstanding to provide flush soffits in the classrooms.

The entrance hall floor will be slate laid in large squares; the floor finish generally, for teaching areas, will be wood block, and strip flooring to the gymnasium, with plastic flooring for margins and skirtings in classrooms and for corridors. The walls externally will be 11in cavity brick, using common bricks rendered in contrasting colours. Some external walls will be of purpose-made concrete blocks perforated to give a coarse texture and sprayed with rendering.

Heating will be by a low-pressure hot-water system.

The total floor area of the school is approximately 74 sq ft per pupil, and the estimated cost will be below £240 per place.

The estimated starting date is January, 1955.

New Model Byelaws for Scotland

I HAVE just received copies of the two sets of Model Byelaws issued by the Department of Health for Scotland. The one set is applicable to Burghs and the other to Counties; each set is available from H.M.S.O. (price 5s). The two are similar in general make-up and content. The Department's Circulars to the Local Authorities point out that the existing Model, which was published in 1937, is restrictive and sometimes inappropriate or even insufficient when applied to modern methods and materials; in addition many districts are without any byelaws or those existing are out of date.

The Circulars plead with the Local Authorities to adopt the new byelaws in an endeavour not to hamper building and at the same time to achieve broad uniformity throughout Scotland so that builders do not have to meet different requirements in each area. This aim for uniformity of byelaws is an admirable one which should be copied in England including individualistic districts such as the L.C.C., which seems to feel it must be different from the rest.

Scotland admit in the Circulars that certain legislation is, in some respects, restricting the preparation of comprehensive byelaws and in consequence the Secretary of State is shortly to institute an enquiry to ascertain what changes to the law may be desirable. It is a pity the suggestions I made on these lines when I observed on the English Model have not yet been put into practice.

As to the byelaws themselves, they are a very excellent step in the right direction and are by far the best set of requirements I have yet seen from any country in the world. They put out the basic essentials necessary for the control of the building, together with an interpretation, and then continue by giving "deemed-to-satisfy" clauses to show how the basic requirements may be met. The basic requirements are set out by giving the essential performance requirements in a number of Parts, each of which is devoted to a particular aspect of performance. It is stressed that the "deemed-to-satisfy" clauses are only examples of the more common methods of construction.

It will be recalled that the Ministry of Health Model attempted to adopt a similar approach and therefore paved the way for this method of writing byelaws, but Scotland has progressed far from the English Model and, in consequence, has achieved really workable documents. Nor has Scotland dodged some of the performance requirements, as did its English counterpart; for example Scotland includes requirements for thermal and sound resistance, on both of which those designing new forms of construction need adequate guidance. I get the impression from a first very general perusal of the Scottish Models that the basic requirements are much more completely thought out, so that the approach is a really new one and not merely a new version of an old document which was the feeling one had about the English Model when it was first issued in 1952.

I was very pleased to see that there is greater sub-division of the types of buildings. These are set out in Schedule A in seven separate classes, thus facilitating the proper differentiations between the requirements for each building type. The classes are: assembly building; building used for manufacture; building used for trade, including a retail shop and a commercial garage; institutional building; office building; residential building; storage building.

Part I is devoted to interpretation, application and general matters. It commences with a fairly lengthy set of definitions of expressions although many are merely references to precise definitions given in particular Byelaws or Schedules. Part II comprises two very general performance clauses, one saying that materials shall be of a suitable nature and quality, properly mixed and applied so they will perform adequately their function and that they shall have a sufficient durability for the conditions to which they will be subjected.

Part III sets down the requirements for structural strength and stability. Straightforward basic requirements are given for the design of foundations, methods of assessing dead and imposed loads, limits of slenderness ratio of walls, columns and chimneys, and limits of stress in walls, columns and chimneys; these appear to follow generally the same lines as the B.S. Codes of Practice.

Part V gives the structural fire precautions which need to be taken to reduce the danger of outbreak and spread of fire. It is made applicable to existing building "so far as is reasonably practicable." It describes the various degrees of fire-resistance each part should be given and also covers such matters as openings in external walls, separating walls, fire division walls and separation of garages from certain other buildings.

Part VI deals with chimney, flues, hearths and the installation of heat-producing appliances. It seems to be generally similar to the English Model Byelaw requirements for similar parts of buildings but is possibly more comprehensive in the detailed descriptions given to supplement the basic functional requirements.

Part VII covers means of escape from fire and is apparently applicable only to blocks of new flats. Although the basic requirement is very brief, very full details are set down, in interpretation clauses, for exits, travel distances, stairways, corridor linings and stair enclosures.

Part VIII deals with the preparation of sites and resistance to the passage of moisture from the ground and weatherproof qualities. A series of functional requirements are set out, each with detailed interpretations of what has, in fact, to be done to meet them.

Park IX covers the drainage and plumber work and requires that "all soil and waste water and rainwater to be disposed of in such a way as to offer no menace to health, cause no nuisance and cause no damage to any building." The detailed requirements do not appear to make any changes from generally accepted practice.

Part X is a short section giving requirements for siting and construction of ashpits and dungsteads.

Part XI requires that every room and common stair has adequate light and venetilation. The requirement for common stairs and passages applies only to buildings intended for "human habitation"; I did not find an interpretation of this expression but I assume it means places where people dwell and is not, therefore, applicable to offices where they will work.

Part XII sets out standards for houses. No similar requirements are given for other types of building. It commences with a requirement that each house is provided with suitable and safe access and continues by setting down what are considered to be the minimum needs for footpaths from streets, stairway widths and for access for refuse collection. The Part continues with a basic requirement that every house be provided with "such adequate and suitably located accommodation and fittings as are necessary to enable it satisfactorily to fulfil its functions." This is surely something which has never previously been called for in byelaws although, in fact, a most essential byelaw requirement. I find, however, some of the detailed requirements, which serve as the interpretation of this basic requirement, a little strange. A handrail must be provided within given heights to all stairs, an efficient installation of artificial light by electricity or gas must be provided, unless the local authority is satisfied that it is not reasonably practicable. Baths must be at least 5ft 6in long overall if of the tub type but a shower may be substituted; it seems strange that a 5ft 4in bath is less acceptable than a shower.

Houses must have sculleries of minimum areas fitted with a sink and a draining board. One presumes that if these are fitted in the kitchen it is necessary to mark the compartment on the plans as "scullery" to comply.

(Continued on page 120)

Your Aunt's Conservatory—or

CAUTIONARY TALES FOR THE SMALL ARCHITECT—1

by Denzil Nield, A.R.I.B.A.

EACH year some 700 architectural students from schools qualify and are loosed upon an unsuspecting world and, after a visit to Italy, which has now ousted Scandinavia, they settle down in some sort of job. They are, of course, of varying degrees of competence. Usually, thanks to the schools, they are quite capable enough to design buildings to the standards their clients or bosses expect, in most cases a few degrees better, but their capabilities to deal with authorities, builders, etc., may be considerably below what the public, not unjustifiably, desires considering that a £5 unexpected extra is a far worse crime to the public than a badly placed window on elevation. This, of course, is as it should be. The row over the £5 unexpected extra teaches the embryo architect far more in a far shorter time than five years of earnest but tired exhortation from school design staff. His actual "professional practice" comes very quickly, and often painfully, from outside. His design training cannot come from outside.

The theoretical "professional practice" taught in schools is of necessity short and rather pompous: "Set down briefly how you would reply to a client who asked you if you would undertake a commission for two cathedrals." This sort of thing gives him the essential background to the office in which he probably starts as an assistant but it does not deal with the aunt who asks him about her new conservatory. Now for every two cathedrals there are millions of conservatories, and garages and drains to be repaired, and small shops and small houses and conversions, and so on, and when there is raised the question of "the architect's place in society," the answer for the man in the street is just there: in giving practical and cheap help and advice with this conservatory or garage or drains or small shop or small house or conversion. This is doubly necessary, as the man in the street already has some prejudice against architects in general, and regards them as incompetent. It is the architect's fault that the shelves are too high or too low in his Council house, that the water system freezes in very cold weather, and so on.

And so, gentle reader, these tales are set down to help the thousand small architects, those starting a new one-man practice or who "are in a large office but like to do a bit at home at week-ends." How often does a junior partner in a firm or a less unapproachable member of the staff of a school find himself approached by an apologetic and embarrassed junior assistant or student for some advice about a "little matter at home. The local builder, who is a likeable chap and whom one does not want to offend wants to know. . . ." These cases are legion, and an extended course of professional practice will never give all the answers, but some matters seem so common that answers, where they lie outside the course of orthodox professional practice, may be of general interest. If the small architect understands and gains the confidence of the small man in the street, more will ultimately be done for the status of the profession than any amount of log rolling among the top brass of central government, local government or industry.

"Mr. Snodgrass . . . is a very good architect, but . . ."

THE CLIENT

"The local builder is a likeable chap, one does not want to offend him." This is so often true that it points the first moral. It doesn't pay to offend anyone, except, perhaps, the dishonest. It does the profession harm, too. Architects have, unfortunately, the reputation of being a bit snooty, a hangover, perhaps, from the "artist" era. This may seem very obvious, but how often does one hear a builder say: "Of course I know Mr. Snodgrass very well; he is a very good architect, but I wouldn't like to bother him with this matter." This superior position may suit Mr. Snodgrass financially but it does the profession harm generally. The same thing does not happen with solicitors or accountants; you go to one solicitor for a will or a High Court case.

So no one loses face by taking on small jobs when he begins, and when he does not want one because it is too small or not the type of work he likes, he should hand it back very tactfully, explaining why he cannot give personal attention to it, and if he can suggest who would be able and willing to do it the client will be pleased and he is more likely to keep the client's respect and confidence for the £50,000 job when it comes along.

The first thing *not* to do with a client who brings a small job is to wave the R.I.B.A. scale of charges in his face. It will be quite incomprehensible to him and make him think that the only thing you think about is how much you will be able to charge him.

The advice to bring the scale of charges to the notice of the client as soon as possible is very sound indeed where the client is a professional man who is used to these things or a business man or a committee whose secretary will want to appear businesslike and enjoy floundering through all the complex clauses. Even in small jobs the fee position should, of course, be cleared up before the architect starts any substantial work, but often the client will raise the matter himself quite early in the proceedings. Sliding scales and extras mean nothing to the man in the street who is having a small job done. What he wants to know is how much cash he will have to pay, and it is quite a successful "ploy" to do some quick mental calculation of what the fee may be and quote him a lump sum, stating what that would be for and what it would *not* include, i.e., 12 per cent for scheme, working drawings, supervision, etc., for a small alteration job, which might include plans for all authorities provided there are no protracted negotiations or appeals involved, but party wall negotiations would be extra, perhaps £10 or £30, depending on how easily the matter is settled. This can, of course, be confirmed by letter when the R.I.B.A. scale can be sent to show that your figure has a proper basis and can be

checked by working out if he is that sort of person.

Now I am going to put on my skates and venture out on to thin ice of "partial services." I think there is a very good case for partial services in small work. Take the case of a man who buys a Georgian house in a street listed as having "Buildings of Architectural Interest" and he wants to add a bathroom at the side. He may have a good builder in tow who has done work nearby that he can see for owners whom he can question. In the past he would get the builder to do it without an architect and would get an ugly addition badly planned, but well enough built for a reasonable and fixed price. Now drawings are necessary for the authorities' consents and an architect is best for this, and the builder knows it.

Assuming that the job will cost £1,000, the architect cannot charge more than £100 for ordinary services and will make a loss if he has many jobs of this kind on hand. But if he only does the drawings and specification he can charge £50 and be paid well for the time spent, for supervision can take up a much greater proportion of the time. The saving is material for the client and the job will not be worse if he knows the builder to be honest and his work to be good. True, by competitive tenders the client may save more than £50, and then supervision is necessary, but I am coming more and more to find that for each type of small job there is one builder in the locality who will be most suitable to do it.

A reasonable arrangement is for the architect to pay an agreed number of visits at certain times, i.e., when the walls are being set out, when the roof is being framed, etc., merely for giving advice, and a separate fee charged.

The pundits may say that there are terrible dangers of divided responsibility and claims of negligence may succeed even where it has been expressly agreed that the architect would not supervise the work. If one reads the case law it seems that there is nothing one cannot be sued for, and I think the risk is very small compared with the commonsense practicability of this arrangement.

It is in these small jobs, which are trouble enough anyhow, that the clients have special idiosyncrasies. There is nothing to be done but bear with them patiently, and if they cannot be persuaded, to comply. Battles on architectural principles should be fought over large matters of general interest, but let him have his little panes in his windows if he cannot be persuaded out of the idea in friendly argument. The small amount spent by persons in these jobs are often more important to them relatively than the large jobs are to wealthy persons or companies, so why should they not have what they like and want to spend their savings on. The same applies to decisions on fittings and choice of decorations; they take up a terrible amount of time, but the client will be a disgruntled client if he feels he has been hurried into a choice. It is best to allow for this in agreeing fees beforehand. Most idiosyncrasies are harmless anyhow, like the Duchess who always had wooden lavatory seats made by the village carpenter, and who sent a message by the maid that the carpenter should wait after fixing it while it was "tried for size," and usually sent a message that "a little more should be taken off here and here."

"Small" clients do not know anything about professional etiquette and it is useless to expect them to. Women particularly like to prattle about other architects and their misdeeds and the only thing to do is to gently steer them off the subject, pass no opinion and think that "there, but for the

"Their direct orders to the builder can cause more trouble"

grace of God, go I." Their direct orders to the builder can cause more trouble. It is pointless to tell them that they must not arrange anything with the builder, as he is there on the job every day and you may be there only once a week. The most one can hope for is to be kept informed of everything arranged direct, and if it is explained to him clearly, the client sees it is the architect's job to keep track of all expense and therefore all variations or extra work must be confirmed by him as they arise. Some system of "on the spot" confirmation in writing is useful in this respect, one such system is outlined later.

(*Next week: The Builder*)

NEW MODEL BYELAWS FOR SCOTLAND

(*Continued from page 118*)

For laundry purposes the kitchen sink may not be used but a tub must be provided in addition, if the floor area of the house is greater than 450 sq ft; it is fortunate that the "tub and sink" is normally installed in Scotland unlike the English custom of one sink for all purposes.

Cooking facilities have to be provided by the installation of gas piping or electric cables to enable a cooker to be connected, but if a solid fuel type cooker is provided it has to be of a continuous burning type. Detailed larder and fuel storage requirements are given although the minimum area of the latter is only 7 sq ft. Press accommodation (cupboards in England, not bars for newspapermen) has to be provided, the total capacity of which has to be such "as will represent an average of not less than 20 cu ft per habitable room." (70 sq ft with 7ft 6in ceiling satisfies this.)

Part XIII covers the space requirements and ceiling heights in buildings for human habitation. Rooms for sleeping are required to have not less than 525 cu ft. (70 sq ft with a 7ft 6in ceiling satisfies this.) Part XIV relates to open space about houses.

Part XV requires adequate resistance to the transmission of heat from the inside of a house to the outside. Detailed requirements are given for walls, roofs and lowest floors. The wall requirement permits the use of an 11-in cavity wall. It also requires every house to be sufficiently protected against transmission of sound from adjoining buildings or from adjoining parts of the same building. It may be difficult to achieve the proposals set out.

Part XVI gives the "deemed-to-satisfy" clauses. These seem generally based on the use of B.S. or C.P. Much helpful detail for the less knowledgeable is given so that there should be no real difficulties in complying with the requirements if and when these models are adopted. There are in addition many explanatory schedules and tables, lists of B.S. and C.P.s and, above all, a fairly ample index so that there is a fair hope of finding the byelaw applicable to each subject.

To sum up: this seems an excellent effort at preparing a set of byelaws which does not hamper those who build and requires only that a proper building is erected. Those responsible for advising the Secretary of State should be congratulated. May the Local Authorities co-operate adequately so that there may be uniform byelaws throughout Scotland. The next move is to plan a combination with England so that there are United Kingdom Building Byelaws prepared under legislation applicable to the whole of this island.

DUTCH UNCLE

ECONOMY IN BUILDING

A Lecture given by H. F. BROUGHTON, A.R.I.B.A. at the R.I.B.A. on 19 January

ACCORDING to the dictionary the meaning of the word "economy" is the "judicious expenditure of money," or the "careful management of labour, time and money" and this is the keynote of my talk. Economy in building does not necessarily mean austerity. True economy is the provision, at the lowest possible cost, of accommodation and services which will allow the building to fulfil its function adequately over a predetermined period with the minimum of maintenance. To-day the cost of building is high and we are often told that the industry runs the risk of pricing itself out of business. It is obviously, therefore, the prime duty of all those concerned with design, construction and research to reduce costs, and this can be done without endangering the strength and stability of the structure, without lowering the æsthetic quality of the design and without reducing the comfort of the finished product.

The search for possible savings should start from the early planning stage; from the initial conception of the project, whether it be a power station, a factory, a block of flats or a housing development. Actually it should start earlier, even with the building owner. A "cheap site," a site purchased without a real knowledge of actual requirements, can result in a costly final product. I will not, however, extend our range as we already have a wide enough field to cover. Assuming, therefore, the normal circumstances; the building owner already has the site and he requires a building or buildings to serve a specific function. Within these conditions the architect has, to all intents and purposes, a free hand. It is at this stage that the search for where to economize must begin. I use the word "search" with a purpose. A close investigation at this initial stage involving as it should an examination and cost comparison of all reasonable alternatives will pay handsome dividends not only in money but in building time.

Design

We are prone to blame the contractor for high cost, for poor organization, for delayed completions but this is not by any means the whole story. Whilst obviously good planning—functional planning and due regard to æsthetics—are the basic functions of the architect, consideration for the builder's problems in implementing the design and carrying out the work will operate as an incentive, encourage good organization and speedier work and therefore result in lower costs. There are some of us who think that the architect should not only specify the form of construction and the materials, but also play a more direct part in determining the methods to be used. The opponents of this idea say the builder knows what is the cheapest method—leave it to him. This may, of course, be quite true where the work is of a traditional or conventional form. Where an architect or his consulting engineer uses a new or non-conventional form of construction he will have considered ways and means of constructing it, the organization of the construction, and the type of plant, mechanical or otherwise, which could be most efficiently used. In fact, the design of his structure may well have been influenced by the particular method of building. It is obvious, therefore, that the method of construction which the designer has in mind, should, at the very least, be considered by the contractor who eventually carries out the work.

The ideal method, of course, would be to bring the contractor in at the design stage, but under our present methods of competitive tendering this is not normally possible. As you know, the London County Council are experimenting with a design team of which a nominated contractor is a member from the very earliest planning stage. The purpose of the experiment is to find the cheapest and speediest method of building multi-storey flats. Every aspect of construction, of equipment, of services and of finishings is being considered in detail and each member of the team will bring his expert knowledge to bear on every problem so that the result should be the most efficient and economic building that it is possible to design and construct.

The team consists of the architect, the engineer, the contractor, the quantity surveyor, the cost estimator and research workers. Now the services of all these people, with the exception of the contractor, are available in some form to any designer—to any architect—and much expert advice is already available to him. The unusual feature of this project is the bringing together of all concerned as a design team from the beginning. We look forward, therefore, to the result of the London County Council experiment with interest as it may well establish the method by which the contractor can best be brought in to the earliest stages of a project.

So much for this particular experiment; let us return to what the architect can do under present conditions to create and encourage economy. Let us look for a moment at the work of the Ministry of Education development group. There is little doubt that this group has done much to develop economy in the design and construction of school buildings. One important method of achieving this is by "Cost Study" as set out in Building Bulletin No. 4. This study divides itself into two parts. First, *cost analysis* which aims at examining the cost of schools already planned and built and for which priced bills of quantities are available and second, *cost planning* which uses the knowledge gained by cost analysis to control the design of future schools.

Every architect can do what this group has done. Not in such a wide field, perhaps, but within his own field. He can have available cost data of the work he has done, as a basis for the comparison of the costs of different forms of construction, of different types of equipment and services and different qualities of finishes and use the knowledge so gained in his future planning.

One more word on the Ministry of Education Bulletin. On pages 12 and 13 there is an appendix in which the effect of plan shape on cost is discussed. It is concerned with the extent of external wall area and its cost in relation to the floor area which the walls enclose. (Figure 1.) Both plan areas are 10,000 sq ft, but the area of enclosing walls on Plan A is 11,000 sq ft while that of Plan B is 12,000 sq ft;

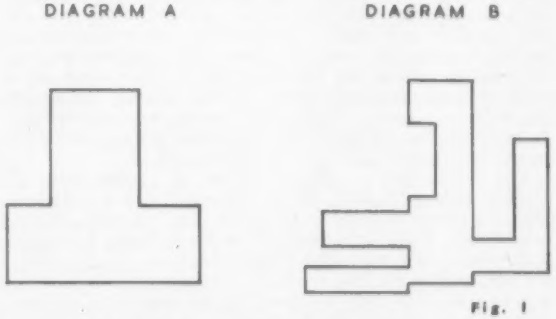


Fig. 1

a saving of 1,000 ft of walling. On a straight price difference we could expect a saving of say £350 to £400, but there are other factors which affect cost—look at the number of external and internal angles on Plan B and compare them with those on Plan A. Any contractor will tell you that angles and breaks in walling are costly. You may well say that every architect is aware of, and acts upon such a first principle of economic design but there are innumerable examples where this is not so. Recently, I had occasion to examine two plans for blocks of multi-storey flats. One plan (Figure 2A) had three flats per floor and the other (Figure 2B) had four flats per floor. The floor

areas of all flats were approximately the same, and the accommodation was similar. But the one plan had 268 sq yd of external walling to encompass three flats while, in the other, four flats required only 240 sq yd of external walling. The relative area of walling per flat was—Plan A —89 sq yd—Plan B—60 sq yd, and the saving in money was approximately £66 per flat or over £1,000 per block.

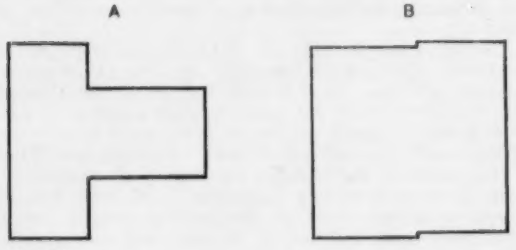


Fig. 2

The Architect and the Building Programme

I suggested earlier that architects might well consider the advantages of taking a direct interest in the planning of the work. For instance, they might call, under the terms of the contract, for a complete programme of all operations and stages of the work. This is not a new idea; time always used to be the essence of any contract. The architect should award a contract not only on the basis of price, but also on the basis of completion time. It was a contractual obligation with some Ministries during the war for the successful tenderer to submit a detailed programme of the work to show how he proposed to implement the time factor which he had stated in his tender and upon which he had been awarded the contract. This was a wonderful incentive to planning and it brought the architect and the contractor much closer together. They became a team. A detailed programme, prepared by the contractor, discussed jointly by him and the architect, possibly amended to suit the requirements of both, became in most instances a vital document. The contractor saw that his efficiency or lack of it could be actually measured and not guessed at, and the architect immediately realized that he would have to make changes, or specify alternative materials to avoid the responsibility of keeping the contractor waiting. It is worth trying, and I am certain that most contractors would welcome the idea. It is, however, important that the programme is a real one and not just a mere pictorial time-table. Against each operation must be set not only the time factor for each operation but also the number and types of operative, the quantities and types of materials, and the static and mechanical plant required to implement the time factor. The mere act of planning in such detail (and it is quite simple) emphasizes the need to phase operations accurately one with another. It forces the careful planning of material placing and it also assists in establishing rational bonus targets.

Fig. 3 provides a typical example of a programme for a small housing project. It is, of course, very often argued that it is not worth while spending time on formulating a programme when it is "certain to break down during the first week." Of course, a programme may break down—not necessarily the first week—but if properly detailed you will find that the contractor will do his utmost to get back on to his programme in the shortest possible time. It will become a point of honour with him, particularly if the architect has a copy of the programme and is progressing the work against it every time he visits the job. It is often asserted, too, that material shortages make programming impossible and that the preparation of the programme itself requires considerable time and skill. I do not myself agree with this view and I have had experience of the successful application of a comprehensive programme on several jobs recently. The influence of such a target on all those concerned with the control of the work is remarkable and has to be experienced to be believed.

Before I leave the design stage there are two more matters in the architect's field in which he can influence economy and speed of building. The first is mainly concerned with small house-building. It is almost common practice for all work below damp-proof course to be treated as provisional. This is understandable, but why not design foundations to suit the site rather than leave it to the Clerk of Works to settle floor levels and the other details such as steps, path levels, etc., which are consequent upon his decision. On level sites the problem is, perhaps, not a serious one, but unfortunately a substantial proportion of our housing sites are on falling ground and the time spent on proper detailing before the work starts will be amply repaid in a saving of money and time. With any other type of building except small housing the architect would certainly provide full details for the underbuilding. On a falling site it is not merely a question of deciding the number of courses below damp-course level. There is much more to it than that. So much, in fact, that single houses, pairs or terraces, cannot be considered in isolation. The site must be considered as a whole. Floor levels should not be decided without taking into account their effect on the amount of cut and fill, the quantity of hardcore, the number of steps to doorways, the making up of finished ground levels, the need for embankments, for retaining walls, the drainage of pavings and, last but not least, the effect on soil and storm-water drain levels. An *ad hoc* decision on floor levels which appears to involve only a few courses of brickwork more or less can result in additional expenditure on these other items, out of all proportion to the relatively small amount involved in the cost of brickwork. Every pair or terrace of houses should have its foundations detailed and where there is any doubt on the score of economy alternative sketch designs should be prepared and rough comparative bills taken off. I know that some architects already follow this practice and get a great deal of satisfaction from doing so, but many, perhaps the majority of architects, do not do so when they are dealing with housing.

Here then is an immediate way of promoting economy. We cannot place the responsibility on the already overworked Clerk of Works—too much money is involved.

Another matter that I wish to touch on is the question of nominated sub-contractors. In certain classes of work and with certain types of equipment and services it is, of course, important for the architect to nominate a sub-contractor. In housing, however, I think the recommendation of the Bailey Committee (Quicker Completion of House Interiors) on this question is pertinent, namely, that the nomination of such sub-contractors should be avoided as much as possible. House-builders on the whole prefer their own sub-contractors. The relationship between a nominated sub-contractor and a main contractor is not in general as close or effective as when the sub-contractor looks directly to the main contractor for instructions as well as payment. Furthermore, the close integration and phasing of the work carried out by sub-contractors with the main contractor's own work can be made more difficult to achieve.

I have suggested some ways in which the architect can contribute to economy in building. Summarized briefly, they mean that the designer should be fully cost conscious, go out of his way to appreciate all the problems of production and develop a partnership with the builder which is real rather than one which is formal. In other words, and as far as the conditions of building allow, marry design to production as in all other industries, so that the final design may be an incentive to efficient organization on the part of the builder.

The Contractor

Given an economic design, how should the contractor complement it with economic production? He must organize and plan. You will say—obviously he must organize and plan. But does he? How many builders plan a contract in the finest detail? Some of our more efficient contractors do plan in this way; they employ sufficient qualified staff to do this work, but this is by no means always the case. I was on a site the other day—a housing contract of over 80 houses involving £100,000 and the general foreman was working on the tools. The finest

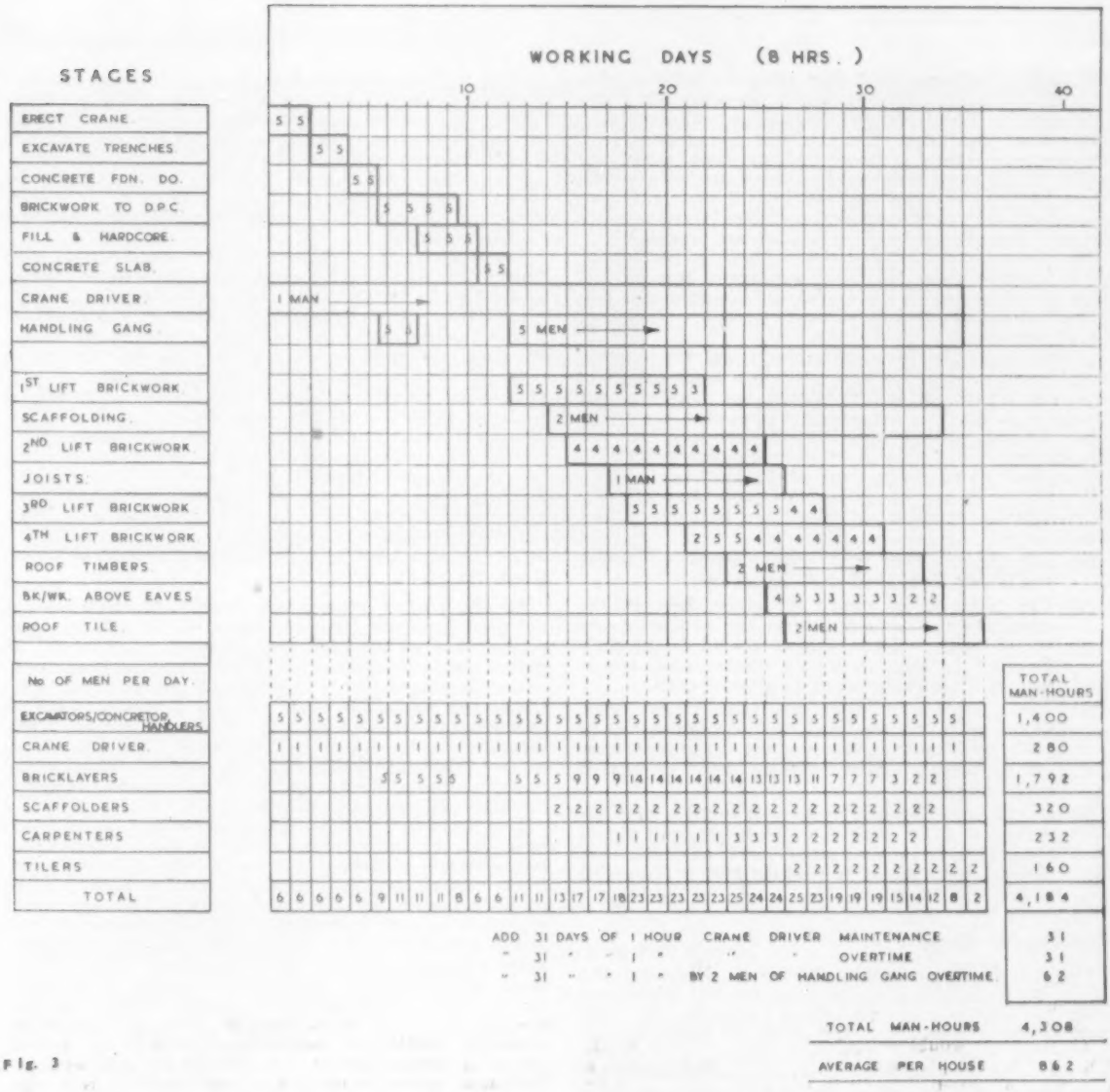


Fig. 3

army in the world will lose battles and will lose men without good staff work. The days are behind us when a job will run itself. In a survey of productivity in house-building—the second report of which was recently published—man-hours per house varied from 1,565 to 4,645, and the reasons for this wide variation were not size of house or specification. They were not the size of the contract or its geographical location. These factors were responsible for small differences only. The greatest single factor responsible for this wide range of production was the quality and efficiency of organization—mainly of site organization.

Good site organization—efficient site organization—is a phrase that is now almost commonplace. What does it imply? It means, as has already been indicated, planning the whole of the work in the greatest detail before the job starts. It involves the provision of adequate staff to see that labour, materials and plant are available at the right times to ensure adherence to the plan. And, lastly, no site organization can be considered "good" which does not include some method of cost control.

How does the builder achieve good site organization? For every job, small or large, he should prepare a detailed programme before the work starts. This is the programme that the architect should see and approve. It will make clear to both builder and architect at this very early stage every facet of the job and the particular problems that are likely to arise. It will facilitate the accurate phasing of sequential operations, pinpoint the key operations, establish the size of gangs and ensure the reduction of unproductive time to a minimum. It will emphasize material delivery dates. It will indicate to sub-contractors well in advance when their services will be required and overall it will operate as an incentive to both staff and operatives throughout the period of the contract.

The functions of the site staff are the same on every job, irrespective of size. First, the delivery of materials at the right time; the correct placing of these materials; their protection and the avoidance of waste. Secondly, the recruitment, organization and supervision of labour, the recording of production and the payment of wages. Thirdly, the provision of appropriate and sufficient plant and tools to do the work economically. On a small job, the foreman, or even a charge hand if the job is small enough, will fulfil all these functions himself. On a large job the responsibility for the whole is still vested in one man, the chief site executive; he may be agent or general foreman, but it will be necessary for him to delegate responsibility to juniors, according to the size of the contract, the speed of the work and the number of men employed. All aspects of the work must, however, be covered. The productivity of the labour employed and, therefore, the economy of the whole job is directly related to the efficiency of the site staff.

The productivity of the labour employed—this surely, from the builder's point of view, is the whole crux of

economy in building. How, then, does the builder obtain and maintain a high level of production from his operatives? Obviously he should provide adequate and efficient supervision since this helps to ensure that his programme is implemented, waste avoided, building time saved—the quality of the work maintained. But this supervision will be much more effective and economic if the right types of incentive are provided for the operatives, labour relations are good and adequate welfare facilities are provided.

In the second report on productivity in house-building NBS. Special Report No. 21 it was shown that productivity was increased by the use of well-designed monetary incentive schemes in which rational targets are established for all operations.

It was found that in those contracts and trades where target bonus schemes had been applied in which the bonus paid was directly related to output, the man-hours for similar work were on the average 15 per cent lower than where no such scheme operated. It was clear, however, that the majority of the schemes had weaknesses and there it little doubt that productivity would have been appreciably higher if they had been more thoroughly planned. In my opinion, the basis of an efficient incentive scheme should be:—

(a) The scheme should be as comprehensive as possible and targets be applied to all operations.

(b) The target levels should be agreed between the operatives and employer before the commencement of the work. These targets should be properly balanced between trades to ensure equal opportunities for earning bonus to all operatives.

(c) The operations to which the agreed targets relate should be fully understood by all operatives and be easily identifiable so that progress at any given time can be visually assessed without resort to detailed measurement.

(d) Bonus should be paid *as soon as possible* after the execution of the work in which it has been earned and, provided rational target levels have been set, the operatives should be paid the greater proportion of the cash saving.

Mechanical Plant

The overall efficiency of a site can be dependent also on the use made of mechanical plant, but this is a subject which can only be dealt with fully in a separate talk. The potentialities of improving organization and increasing production are enormous. The chief reason is, of course, that the use of a machine provides an organizational framework within which the operations can be more accurately pre-planned or programmed: the ability to adhere to a programme is greatly improved where mechanical plant is used. This is particularly the case where the machine does the whole of the handling operation, that is, from stack or mixing point to placing point as, for example, with a crane which conveys both horizontally and vertically. Where a handling operation is only partly mechanized, that is, where the machine conveys only vertically and not horizontally, then the machine ceases to exercise effective control. A good example of this is the mechanical hoist which requires materials to be handled manually to its base and again manually distributed at scaffold level. In this case organization of the work becomes more complex and the time cycle much more difficult to maintain.

Another good example of machines controlling production is in the mixing and placing of concrete at ground level. Where a power barrow or mobile skip is used to carry the complete batch from mixer to placing point, the machines can be synchronized to work within a predetermined time cycle and thereby control the speed of the operation. A good combination for jobs of a moderate size is a 10/7 mixer working in conjunction with a power barrow with a 7 cu ft skip. With a gang of seven men and a 3-minute time cycle this combination mixes and places at the rate of $\frac{1}{2}$ cu yd per man-hour compared with, shall we say, $\frac{1}{4}$ cu yd if transported manually.

The aim, therefore, in purchasing, and for that matter in designing, mechanical handling equipment should be to deal with the complete operation which means either a machine which will both carry and lift, or two machines which are of equal capacity and can be so synchronized in operation that they do, in fact, act as a single machine. The machine or machines then serve a dual function, they not only handle the materials and thereby lighten the work of the operatives, they also create a machine time cycle within which any ancillary manual operations are designed to take their part.

Before leaving the subject of plant I would like to refer briefly to what I may call static plant. I mean, of course, scaffolding, formwork, ladders, barrows and tools in general. I am afraid that on far too many jobs there is a shortage. The operatives have to make do, they have to improvise. On three jobs with which I have been concerned recently, progress has been delayed by shortage of plant—mainly scaffolding. Sometimes this is unavoidable but there is a tendency, in fact, there always has been a tendency, to try to carry out four contracts simultaneously with plant which is only really adequate for three. To-day this is particularly misguided. Labour is too costly to allow it to be hampered by causes which can be avoided. Without good and adequate equipment and tools it is impossible to maintain high production and therefore to achieve economy.

Cost Control

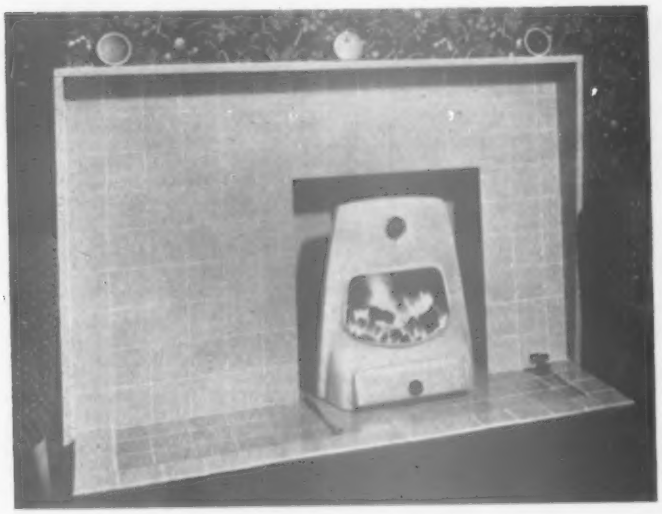
Finally, I must mention cost control—probably one of the most important factors in the drive for economy and one which is all too infrequently applied. Cost control is part of good site organization; it is a measure of production and to be effective need be concerned primarily only with labour and mechanical plant. It is a current measure of production taken—say twice a week—which enables the general foreman or agent to compare with his targets, and to take immediate action where necessary by altering his methods, or size of gangs, or deal with any weakness which has been pin-pointed by the figures.

Cost control is not so formidable a task as is often imagined. If, for instance, an efficient and comprehensive bonus scheme is operated, cost control can be incorporated in the scheme. Again, it is not essential to develop costs on all operations all the time. Every builder will know that when he starts a contract certain operations or sections of the work are likely to be difficult. To start with, production can be measured daily on these items alone. When these operations are working economically and within target, another batch of operations can be dealt with in the same way, and so on until the whole job is running smoothly. Thereafter, spot checks can be taken on various operations to ensure that production is being maintained. As I implied earlier, the method of measuring production can be relatively simple. A schedule of operations for the whole of the work is drawn up, each operation being numbered and very briefly described—the bonus schedule will suffice for this—and against each operation is set a target in man-hours or money calculated from the rates in the bill of quantities. Copies of this schedule are posted in convenient places about the job so that all operatives can refer to and become familiar with it. The operatives themselves record on daily time cards instead of weekly time sheets—daily records are much more accurate than weekly. Each operative is handed a card when he clocks on in the morning and returns it, filled in, when he clocks off at the end of the day. Each evening there is in the foreman's office a complete record of the day's production and the time for any operation can be quickly checked against the appropriate target. This is an extremely cheap method of cost control and, as you will appreciate, it can be elaborated to almost any degree.

Conclusion

There are many other aspects of economy, but I have endeavoured in this talk to emphasize those which I consider most important. The judicious expenditure of the client's money depends on architect and builder. With the architect it means an understanding of method as well as of form and materials, coupled with a full appreciation of cost, and with the builder it means efficient organization, and particularly site organization, in all its aspects.

Acknowledgments: This paper (D.S.I.R. Note E483) appears by permission of the Director of Building Research.



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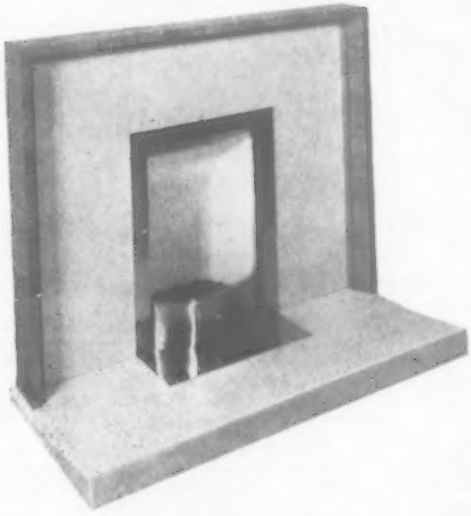
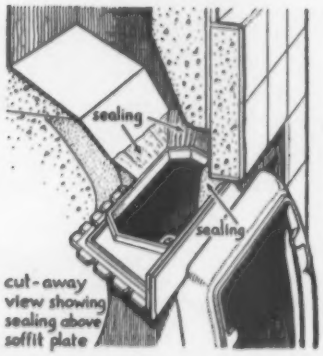


3

Some New Fires and Fireplaces



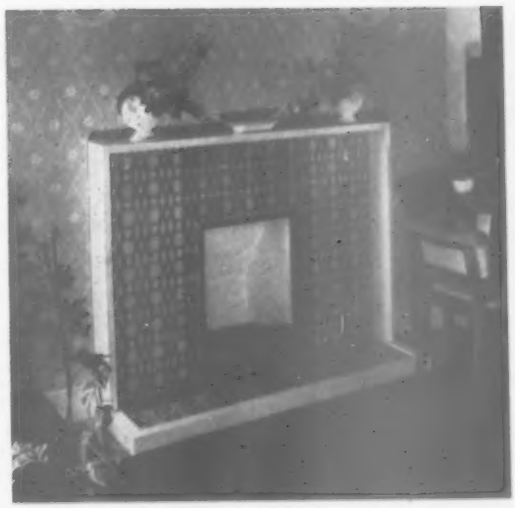
4

FIRES and fireplaces rank with light-fittings as subjects for constant re-design. The two illustrations at the top of the page show examples of fires recently designed to give direct radiant heat, radiated heat and convected heat. Fig. 1 is the "Hurdapta" open fire, made by Hurseal, Ltd., and is shown in a tiled surround and wood mantel which, it is of interest to note, were well made by an amateur. Price, £9 19s 6d. Fig. 2 shows the Radiation "Parkray" Fire No. 1, set in a tiled recess using a flue adaptor; the diagram underneath, Fig. 4, demonstrates the sealing of the soffit plate when the fire is set in an existing 16in by 22in fireplace. Price, including gas-ignition burner, £7 2s 6d to £7 19s 3d, according to colour.

On the left, Fig. 3, can be seen one of a new range of Challen Wood Mantels by The Metal Agencies Co., Ltd. These timber surrounds are built in a "piano factory," and have the high-quality finish usually associated with the piano industry. The polish finish is cellulose, the timber African mahogany.

Fig. 5 shows a fireplace designed for the bedroom by W. N. Froy & Sons and shown with six other designs in a new setting at their King Street, Hammersmith, showrooms. Furniture and layout are designed and supplied by Heal & Sons, Ltd. The fireplace has a painted whitewood moulding and curb, with a tiled interior and hearth in beige and brown with a dark brown motif.

The interior frame is stainless steel angle 1in by 1in, 16in wide, the fret is chromium plated.



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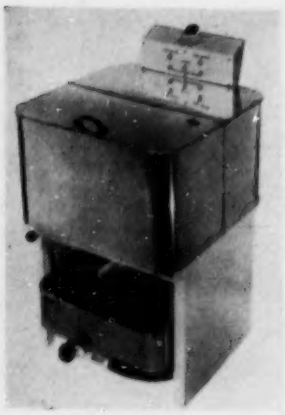
MOSAICS

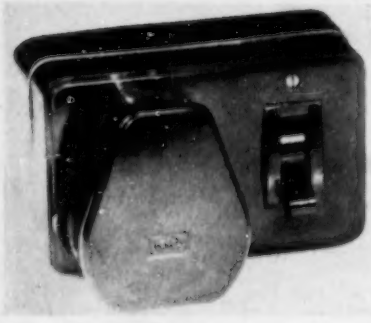


FITTINGS

DISHWASHING MACHINE

C2/17

The latest model in the Kent range of Dishwashing machines by Max Arc & Electrics Ltd., Terrace Road, Walton-on-Thames, Surrey. This machine has been designed to be used in kitchens catering for approximately 100 meals in an hour. The unit is completely self contained, having its own immersion heaters, 2 by 1½ kW. loading, for heating the water, a ½ h.p. pump for emptying the machine, and reservoir tanks. Size 25in square on plan, 32in high. Cost £139, no tax.

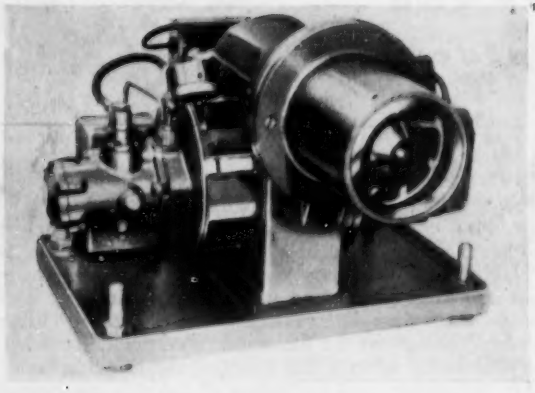


SERVICES

ELECTRICAL ACCESSORIES

B5/35

A three-pin switched and shuttered 15 amp socket and plug, part of a new range recently introduced by Volex Electrical Products Ltd., Salford 6. The new range includes cord grip and batten lampholders, 2- and 3-way ceiling roses, junction boxes, tumbler switches, plugs and sockets. Made either brown or cream; costs, brown without plug, 9s, cream with plug, 13s 5d. Conforms to B.S. 546 and 816.

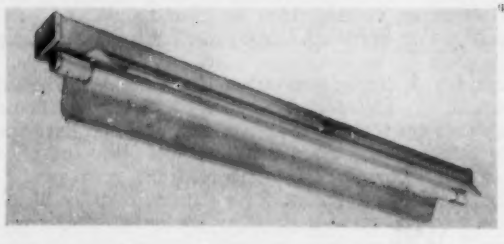


SERVICES

WATER HEATING

B6/15

A new range of oil burners by Brockhouse Heater Co. Ltd., West Bromwich, Staffs. The first three models are suitable for boilers rated between 75,000 and 600,000 B.T.U's/hour. The standard burner is powered by a ¼ h.p. electric motor. Controls comprise a Satchwell Control Panel, Fluestat and Immersion or Surface type boiler control thermostat.



SERVICES

LIGHTING

B1/76

A new range of industrial fittings, by British Thomson-Houston Co. Ltd., Crown House, Aldwych, W.C.2 with bayonet-cap lampholders and the "Pendicone" suspension principle. The new range consists of one and two lamp channels fully wired with either "Switch Start" or "Instant Start" control gear, together with channel covers to form bare-lamp fittings. A new enclosed type "Perspex" diffuser fitting is suspended in one piece from the basic channel. It will hinge from either side of the channel for rapid re-lamping.

INDUSTRIAL NOTES

● The F.E.18 Ultrasonics Panel of the British Welding Research Association, is considering the need for a standard, single-hole, steel reference block for use in ultrasonic testing. Such blocks would need to be commercially available and should bear a mark showing that they are of approved design and quality.

All firms and individuals interested in this possibility are asked to communicate with the Secretary, the F.E.18 Committee, British Welding Research Association, Abington Hall, Abington, Cambridge, from whom further information may be obtained.

● For the convenience of users of Osram fluorescent tubes in switch start circuits, The General Electric Co., Ltd., has introduced a universal starter switch (OS345 Model S.T. 26) for use on the voltage range 200/250V A.C. with 3ft, 4ft and 5ft tubes. The new starter covers the duties hitherto performed by four different units. It is interchangeable with other universal glow starters. The price is 6s.

● The following British Standards have been published and are obtainable from the British Standards Institution, British Standards House, 2, Park St., London, W.1, or from 12, Hilton St., Manchester, 1. Price 2s each: BS864, 1953 Capillary and Compression Fittings of Copper and Copper Alloy for use with Copper Tube Complying with BS659 and BS1386; and BS 606, 1954: Plaited Sash Cords Made from Hemp.

● A new reference has been made to the Monopolies Commission: they are to report on the supply in central Scotland of sand and gravel suitable for building or civil engineering purposes. Their report is to cover both the facts of the matter and the bearing of the facts on the public interest.

Any person or organization wishing to offer evidence on this subject should write to the Secretary of the Monopolies and Restrictive Practices Commission, 3, Cornwall Terrace, Regent's Park, London, N.W.1.

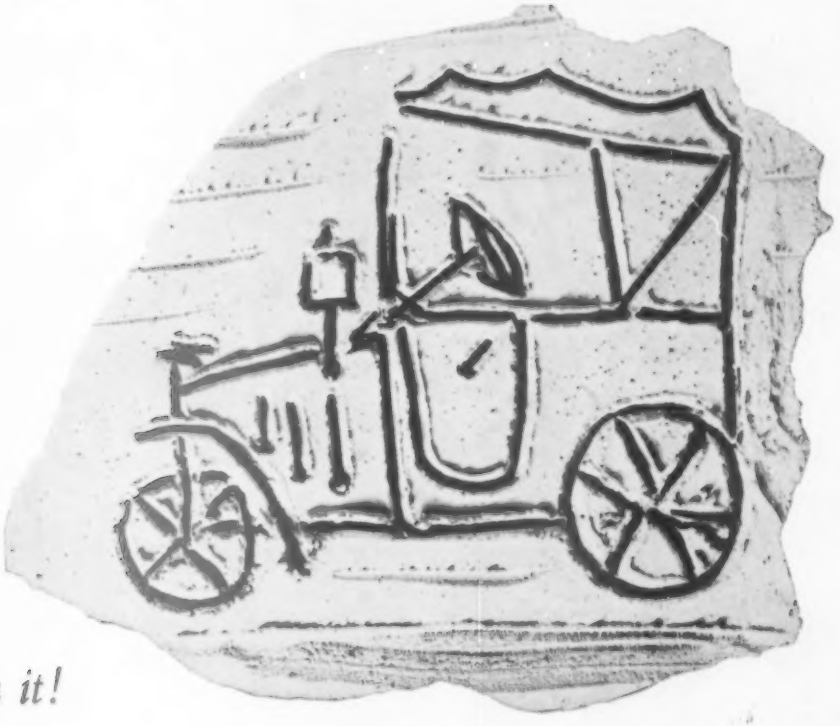
● Mr. John W. Orr has been appointed as Technical Representative to the London Office of The Midland Expanded Metal Co., Ltd., at Craven House, 121, Kingsway, London, W.C.2.

Many architects, surveyors and builders will remember Mr. Orr as the Divisional Engineer of The Trussed Concrete Steel Co., Ltd., for the South West of England and South Wales where he has been operating since 1947 in charge of their Bristol office.

● Taylor Woodrow's wholly owned subsidiary, Taylor Woodrow (Canada), Ltd., has bought a controlling interest in Monarch Mortgage and Investments, Ltd., which, with a subsidiary company, is responsible for large-scale building and civil engineering developments in Canada.

● On January 6, 1954, the Mayor of Blackburn, Councillor R. Weir, J.P., opened the new Blackburn premises of The General Electric Co., Ltd., in Mincing Lane, Blackburn. The opening ceremony was attended by Mr. Leslie Gamage, M.C., Vice-Chairman and Joint Managing Director, and many friends of the G.E.C. in the area.

● Northern Aluminium Co., Ltd., announce that the telephone number of their Leeds area sales office is now Leeds 33621.



No future in it!

"I suppose you know that the horseless carriage like other pieces of progress came in for a good deal of scepticism in its time."

"Of course I do. But what has the horseless carriage to do with us here today? I suspect you are going to use it as a vehicle . . ."

"Exactly, to introduce the advantages of Carlite pre-mixed vermiculite plaster over old-style sand based plaster."

"I should think you architects must find the advantages considerable."

"Overpowering. Because Carlite is pre-mixed plaster, its quality is absolutely controlled at the factory. I know that when I specify Carlite on a job, I'll get exactly what I expect."

"But that would solve a big problem for us contractors too."

"Of course. If an architect specifies Carlite you just give him Carlite. No bother about proportions of sand, or mixing instructions. Or for that matter great heaps of sand disfiguring the neighbourhood."

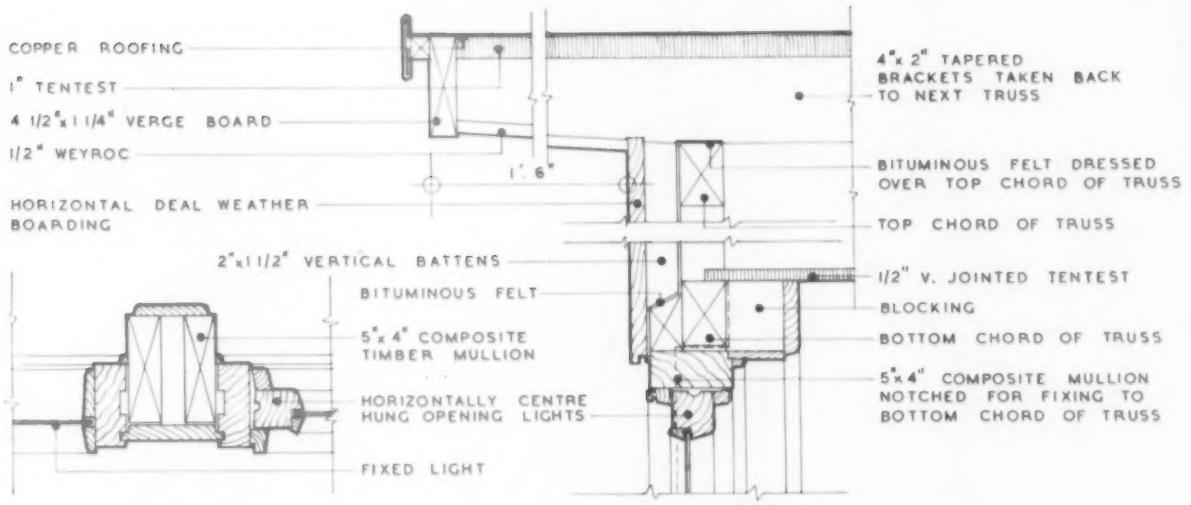
"How does Carlite come out in use?"

"Top marks. It's tough, and exceptionally resistant to cracking. The fire resistance is very high, and here's something that ought to please you builders, Carlite weighs less than half as much as old style plaster."

"That certainly would save some elaborate dead load lifting. I'm beginning to see the point of you introducing the subject of progress."

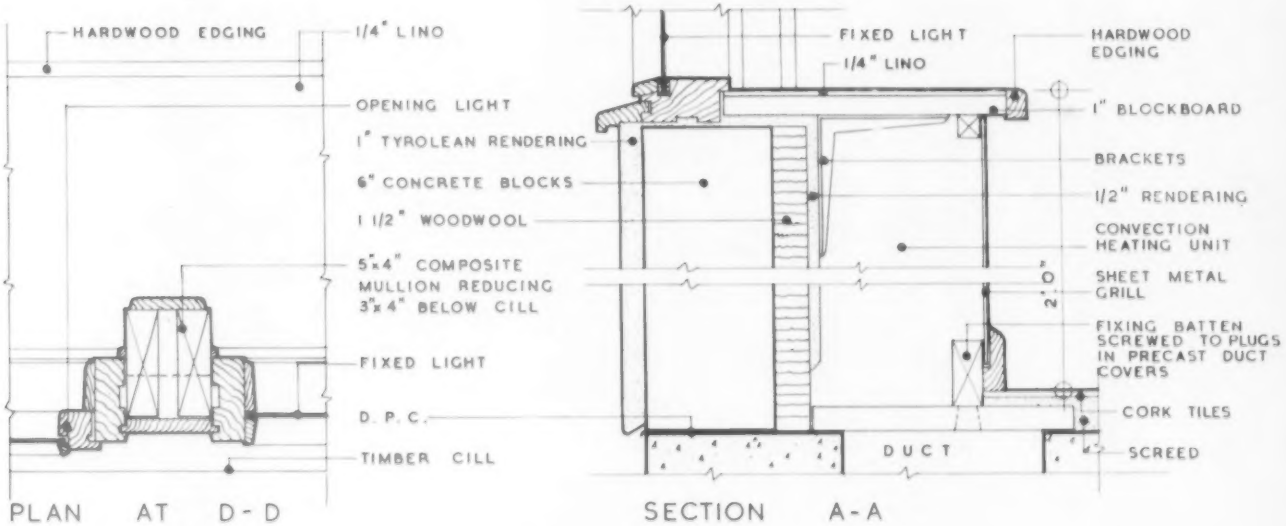
Carlite

For full details of Carlite write to: The Carlisle Plaster & Cement Co., Cocklakes, Carlisle. The Gotham Company Ltd., Wheeler Gate, Nottingham



PLAN AT C-C

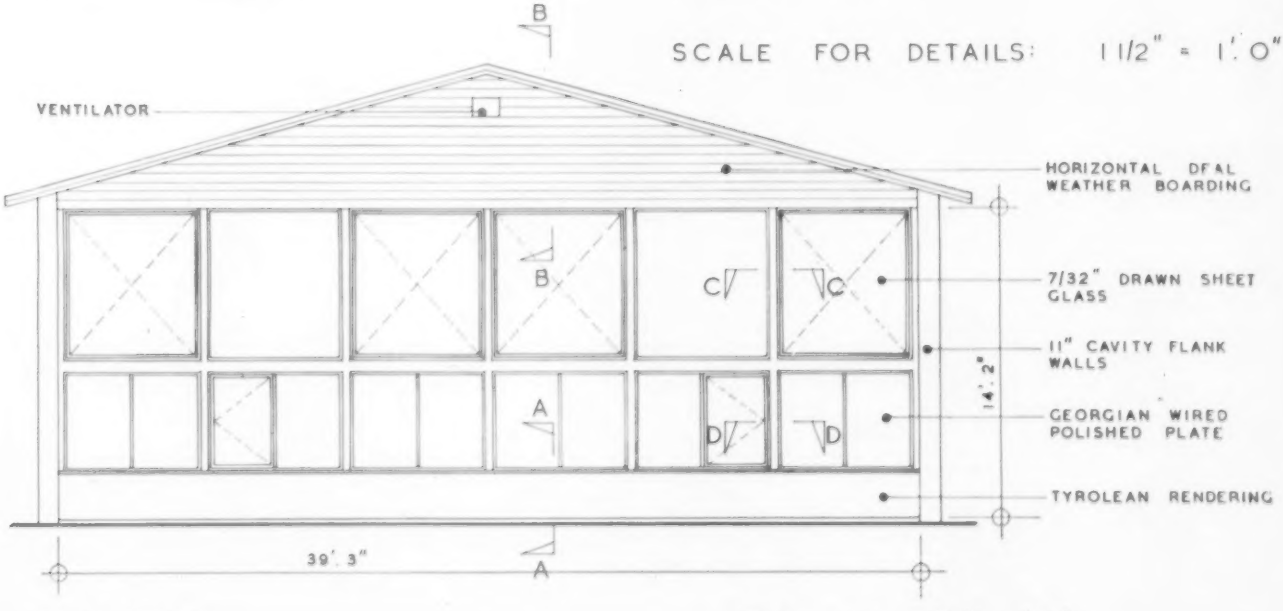
SECTION B-B



PLAN AT D-D

SECTION A-A

SCALE FOR DETAILS: 1 1/2" = 1'. 0"



ELEVATION

SCALE: 1/8" = 1'0"

WINDOW, ROTTINGDEAN C. OF E. SCHOOL

ARCHITECTS: HILTON & J. M. WRIGHT

CURRENT MARKET PRICES (LONDON)

(These prices apply to material purchased in the quantities named or otherwise as might be expected for a new building of moderate size.) **January 1, 1954**

AGGREGATES AND SAND

1½ inch—all in—ballast	21/–	Yard cube
¾ inch do. do.	22/–	delivered
¾ inch screened shingle	20/9	(in five yard
⅜ inch do. do.	21/–	loads or
¼ inch granite chippings	60/–	more)
Sharp washed sand	21/–	
Pit sand	20/3	
Building sand	20/3	
Broken brick	17/6	
1½ inch shingle	20/–	
Cartage of muck	7/6	

BUILDING MATERIALS AS DESCRIBED, CENTRAL LONDON

CEMENTS packed in paper bags	Per ton
Portland in 6 ton lots	95/–
Do., from 1 ton to 5 ton 19 cwt do.	104/–
Do., Rapid hardening (6 ton lots)	103/–
Do. (but 1 ton to 5 ton 19 cwts)	112/–
Cement "Aquacrete" (do.)	136/6
Do., "417" or "Polar" (do.)	136/6
Do., "White" (1 ton lots)	155/6

LIME—				
Hydrated and Ground	including paper bags	123/–	(1 ton loads)	deliv'd.
		120/6	(2/3 do.)	do.
		110/6	(4/5 do.)	do.
		109/–	(6 do.)	do.

PLASTER—	
Keenes, coarse, pink (2 ton lots)	185/6 ton
Do. do. white (do.)	191/– do.
Sirapite, do. (2 ton to 3 ton 19 cwt lots)	137/3 do.
Do. finish (do.)	145/3 do.
Hardwall, do. (do.)	148/9 do.
Plaster, coarse, pink (do.)	134/– do.
Do. do. white (do.)	142/6 do.
⅜in. Plaster baseboard (25 to 149 yds)	2/9 Yard Sup.
Do. (150 to 299 yds)	2/5 do.
3½in Jute scrim (100 yd roll)	8/7 each
Cow hair (under 3 cwt)	97/6 cwt

FIRECLAY—	
Stourbridge, loose (1 ton lots)	156/3 Ton delivered
Fire cement	12/3 14 lb.

BRICKS

BACKING BRICKS (In truck loads)—		
Flettons	110/–	per 1,000 delivered
Do. Keyed	112/–	do.
Do. bullnose	130/–	do.
Blue wirecuts	454/–	do.
White	192/–	do.
Southwater engineering (No. 1)	325/–	do.
Firebricks—2½ inch	68/–	per 100 delivered
Do. —3 inch	79/9	do.

STOCK BRICKS—		
Mild stocks	173/6	per 1,000 at Works
Second, do.	204/6	do.
First do.	220/6	do.

Add for delivery—approx. 50/- per 1,000 in lorry loads.

FACINGS (ex truck or lorry)—		
Rustics	135/–	per 1,000 delivered
White	197/–	do.
Blue pressed, 2⅝in	501/–	do.
Do. bullnose	519/–	do.
Reds (Multi sand faced)	279/–	do.
White glazed stretchers	1280/–	do.
Do. headers	1260/–	do.
Do. bullnose	1600/–	do.
Do. double stretchers	1700/–	do.
Do. double headers	1500/–	do.
Breeze fixing bricks	28/6	per 100
Fire tiles and lumps	31/6	foot cube
Wall ties—8″ × ⅞″ × $\frac{3}{16}$″, black	60/–	per cwt.
Cement mortar (1 : 3) hand-made	80/–	yard cube

BRICKLAYERS' SUNDRIES— AIR BRICKS		9×3in	9×6in	9×9in	12×9in
Iron	each	1/9	2/11	4/4	5/11
Galvanized do.	do.	3/2	5/3	7/10	10/5
Terra Cotta	do.	1/3	2/6	6/–	10/2
Chimney pots, Terra Cotta (11 to 25)	do.	1ft 6/8	2ft 11/8	3ft 26/6	4ft 45/8

PARTITIONS—

18in × 9in Blocks keyed for plastering.

	2in	2½in	3in
Per yard super in 6 ton lots			
In solid clinker including any half blocks	3/6	4/1	4/10
In cellular clinker blocks	4/–	4/8	5/5
In hollow clay blocks	4/3	4/6	5/–
Clinker blocks in small quantity	5/1	6/–	7/1

Intermediate quantities in all types may be had at intermediate prices.

Smooth in lieu of keyed faces extra cost per side 3d. per yd. super.

SINKS

Fireclay white glazed in and out—standard quality.

	24 × 18in	30 × 18in	30 × 20in
London pattern, no overflow, 6in deep	62/–	77/–	81/–
Belfast, plain edge, 10in deep	71/–	122/–	163/–

FLUE LININGS PLAIN, CIRCULAR

	Foot lineal Straight	Each Bends
9in diameter	3/8	11/–
10in do.	4/7	13/9
12in do.	8/8	26/–
9in diameter, beaded end, 12in high		4/10

FLUE PIPES AND FITTINGS

	4in	5in	6in
Heavy asbestos type, 6ft. length	15/3	21/–	26/6
Do. 3ft length	7/8	10/6	13/3
Do. bends	5/9	7/3	8/8
Light asbestos type, 6ft length	12/6	15/9	21/–
Do. 3ft length	6/3	7/11	10/6
Bends	4/7	5/9	6/11
Baffler	12/5	14/9	15/8

DRAINAGE GOODS

GLAZED STONEWARE STANDARD LIST

ORDINARY TYPE—EACH	4in	6in	9in
Pipes in 2 feet lengths	1/8	2/6	4/6
Bends	2/6	3/9	10/1½
Junctions (4in on 4in, 6in on 6in, 9in on 9in)	4/2	6/3	13/6
Gullies with 4in outlets	6/3	6/10½	11/3
4in horizontal inlets	2/–	3/–	5/–
4in vertical ditto	3/–	4/–	7/–
Black iron grids	9*d*	1/5	2/9

Adjustment to Current Cost

	2 ton lots or more	Less than 2 ton lots: 100 pieces or more	Less than 2 ton lots: Under 100 pieces
"Best" pipes and fittings. Percentages to add	67½	97½	107½

Further percentages to be independently added in respect of: British Standard pipes, etc. 10. "Best" Tested pipes, 37½. British Standard Tested, 47½.

IRON DRAINAGE GOODS—

Under 2 ton lots.

Each	4in	6in
Cast iron pipes, 9 feet long	60/3	89/6
Do. 6 feet do.	44/1	69/5
Do. 4 feet do.	34/9	55/–
Do. 2 feet do.	21/4	33/4
Short bend	13/10	28/10
Junction	24/5	49/11

CURRENT MARKET PRICES *(Continued)*

DRAINAGE GOODS—*Continued*

GULLEY PARTS—	4in	6in
Traps, high level, invert	23/6	57/– each
Inlet, bellmouth pattern	16/–	24/6 do.
Do. with one vertical branch	23/6	38/– do.
Do. with two do.	53/–	95/– do.
Sealed cover, with felt washer	8/6	18/– do.

RAINWATER SHOES	4in	6in
With vertical inlet and rebated top	27/–	72/– each
Extension piece, 6in high	17/–	17/6 do.
Flat loose coated grating	3/6	4/– do.
Loose solid coated cover	5/9	6/– do.

MANHOLE CHANNELS, WHITE GLAZED— Each	4in	6in	9in
Straight, 2 feet long	14/1	20/–	34/–
Taper, ditto	23/6	23/6	35/3
Bends, main, half section	27/–	38/10	63/5
Ditto, branch, ditto	16/6	23/6	—
Ditto, ditto, three quarters, ditto	22/5	36/6	—
Junctions, single	22/5	38/10	—
Ditto, double	30/8	52/10	—

BROWN GLAZED CHANNELS—
Based on standard list (less than 100 pieces)

	4in	6in	9in
Half-round main channel (2ft long)	2/8	3/11	7/–
Extra for stop ends	2/8	3/11	7/–
Extra for outlets	5/3	7/10	—
Channel bends with splayed ends	7/10	11/8	—
Three-quarter section do.	10/5	15/7	—

MANHOLE COVERS—	Black
24×18in Light foot traffic	32/6 each
Do. Strong do.	48/6 do.
Do. Light car traffic	102/– do.
Do. Road traffic	155/– do.

SUNDRIES—	Galvanized
Manhole steps	8/6 each
4in Mica valve fresh air inlets (L.C.C.)	23/– do.
Plumber's hemp	6/– per lb.
Gaskin, caulking	1/9½ do.
Canvas backed hair felt, 4in wide	9*d*. per ft run

ROOFING MATERIALS

WELSH SLATES (delivered)—

Sizes in inches	Quantity 1,000 to 1,999 per 1,000	100 to 499 per 100	1 to 99 per doz.
22×11	1840/–	222/9	29/6
20×10	1579/6	191/3	25/3
18×10	1167/3	141/3	18/9
16×8	784/–	95/–	12/6
14×9	700/9	84/9	11/3
14×4½	313/–	37/3	5/–

TILES (Broseley and Staffordshire)—	per 1,000	per 100
10½″×6½″ Machine made	288/3	35/–
Do., hand made, sand faced	339/–	41/–
Hips, valleys and angles	29/9 per dozen	
	Per 1,000	Per 100
Plain concrete tiles	175/–	19/3

Sheeting asbestos corrugated, 6in pitch (23 to 85 super yard lots)	6/5 yard super
4½in×16 gauge, drive screws (galvanized)	16/3 gross
7½×¼ hook bolts and nuts (do.)	52/6 do.
Washers, round, flat, galvanized	4/9 do.
Do. do. bituminous	2/– do.

ROOFING FELT—	
Sanded bitumen felt (55lb)	1/– Yard Super
Ditto, but 75lb in weight	1/6 Do.
Inodorous felt, best quality	3/– Do.
Ditto, second quality	2/4 Do.
Underlining	1/8 Do.
Sheathing	1/8 Do.
Galvanized felting nails	1/6 lb

PRECAST CONCRETE LINTOLS—
1 : 2 : 4—½in material, finished with fair exposed faces, including all form-work and one ½in. diameter mild steel rod reinforcement to each 4½in in width.
Per foot lineal delivered to site.

4½in×6in	9in×6in	9in×9in	13½×9in	18in×9in
4/–	6/–	7/8	9/6	11/6

STONE

PER FOOT CUBE in random blocks not exceeding 20ft average in each.
BATH STONE F.O.R. SOUTH LAMBETH—
Monks Park 6/8 St. Aldhelm 7/8 Doulting 7/5
STONE F.O.R. NINE ELMS—
Portland brown Whitbred 7/5. Beer 7/–.
Over 20ft average cube blocks extra cost.

TIMBER

Softwood—sawn—random lengths.

	Per Standard	Per cubic foot
Carcassing quality	£100	12/1½
Joinery quality	£120 and up	13/4

Plain edged unsorted flooring, per square

¾in	1in	1¼in	1½in
90/–	110/–	138/–	165/–

½in insulating wall board (600 yards) 4/8 yard super.
Larger quantities cost less, and smaller quantities more.

SUNDRIES—	Dia.	3in	6in	9in
Black hexagon bolts, nuts and washers. Each	½in	6*d*.	7½*d*.	9½*d*.
	⅝in	7½*d*.	10½*d*.	1/1*d*.
	¾in	10½*d*.	1/2*d*.	1/5½*d*.
Sashline, hemp, good quality Per Yard Run	No. 6	No. 8	No. 10	
	9*d*.	1/–	1/3	
Floor brads	67/– per cwt			
Cut Clasp Nails	70/– per cwt			
Steel ordinary screws	1″ No. 8 2/7	2″ No. 8 4/2	per	
Brass, ditto	Do. 7/–	Do. 13/2	gross	

HARDWOOD—

Prime	Per ft super ¾in	1in ft	Per cube
African mahogany	2/4	2/6	28/–
Honduras ditto	4/–	4/7	55/–
Portuguese Guinea ditto	3/1	3/3	36/–
African walnut	2/5	2/7	29/–
Australian ditto	5/6	5/10	65/–
English oak	4/3	4/6	50/–
Yugoslavian ditto	3/4	3/7	40/–
Burma and Siam Teak	5/–	5/9	65/–

DOORS.—STANDARD TYPE SOFTWOOD

Each in quantities 12 or more.
1⅜in finish, 4 horizontal panels moulded both sides, 6ft 6in high.
2′ 3″ wide 41/3
2′ 6″ do. 42/6
2′ 9″ do. 43/9

FLUSH DOORS 1⅜in thick, ply faced both sides, lipped edge.
All 6ft 6in high.
2′ 3″ wide 51/6
2′ 6″ do. 52/6

PANELLED DOORS : see B.S. 459—Part 1.

FLUSH DOORS :— see B.S. 459—Part 2.

2in (nominal) as last but upper panel prepared for glazing
2′ 6″ wide 59/–
2′ 9″ do. 62/–
2in (ditto) all as above but in 3 panels.
2′ 6″ wide 55/9
2′ 9″ do. 58/3
2in (ditto) all as above but in 2 panels.
2′ 6″ wide 51/3
2′ 9″ do. 53/6

IRONMONGERY

	2in	3in	4in	5in	6in
Cast iron Butts, per pair	10*d*.	1/3	2/–	3/9	5/4
Hinges, spring, single action regulating, japanned, each	—	6/9	9/–	12/–	15/–
Do. but double action spring only, each	—	12/–	15/6	22/9	27/9
Do. blank only, each	—	5/6	10/6	12/9	16/6

Purchase Tax facts . . .

Notwithstanding that PURCHASE TAX at the rate of 25% has been imposed on *MARLEY* FLOOR TILES as from the 6th January, 1954, where MARLEY TILES are being fixed by our own Tilers the following increases ONLY will apply

			PER SQ. YARD
A.	Housing	Standard Gauge	11d.
		$\frac{1}{8}$"	1/-
A.	Standard	Standard Gauge	1/-
		$\frac{1}{8}$"	1/1
B.		$\frac{1}{8}$"	1/5
C.		$\frac{1}{8}$"	1/11
D.		$\frac{1}{8}$"	2/1
E.	Housing	Standard Gauge	1/1
		$\frac{1}{8}$"	1/2

Dry rot is eliminated
Sub-floor draughts are impossible
Heat loss is reduced
The floor is complete and decorative
Installation is speedy
Quality is high : cost low

There's nothing like–MARLEY

Cock o' the walk

The Marley Tile Company Ltd., London Road, Riverhead, Sevenoaks, Kent. *Sevenoaks 2251*
Scotland : *Bishopbriggs 1093.* **Wales :** *Pencoed 376.* **N. Ireland :** *Belfast 24447.* **Eire :** *Dublin 51794*
London Showrooms at Alfred Goslett & Co. Ltd., 127-131 Charing Cross Road, W.C.2 *GERrard 7890*

CURRENT MARKET PRICES *(Continued)*

IRONMONGERY—*Continued*

	12in	18in.	24in	30in	36in
Tee hinges (japanned), per pair	2/-	3/10	—	—	—
Do. but stronger, per pair	3/4	6/1	8/3	—	—
Hook and Ride hinges, per pair	—	—	13/4	16/3	24/10

BOLTS—each—	3in	4in	6in	8in	10in	12in
Cabinet, barrel, straight or necked	1/4	1/6	2/-	—	—	—
Square spring, with brass knob	1/3	1/6	2/-	—	—	—
Tower bolts	—	1/7	2/3	3/-	3/9	4/6
Barrel bolts	—	2/6	3/8	4/10	6/2	7/6
Add to Tower or Barrel bolts if necked	—	4½*d*	5½*d*	6½*d*	6½*d*	6½*d*

LOCKS—each			
Rim lock, 2 lever, wrot case brass bolt and bushing	11/9	Brass furniture	3/-
		or Bakelite do	3/1
		Bakelite finger-plates	2/3
Mortice lock, 2 lever, bushed	15/8	Brass furniture	7/-
		or Bakelite do	3/8
Cylinder latches, japanned case			17/-
Brass sash fastener		each	4/-
Casement fasteners (malleable)		do.	1/6
Do. stays (do.)		do.	2/-
Axle pulleys (brass face, iron wheel)		do.	3/4
Do. as last, but with brass wheel, 1¼in		do.	4/1
Sash line, No. 8 Anchor yellow label		per yard	1/-

METAL GOODS

Basis—Rolled steel joists, all sections from 5″ × 4½″ to 16″ × 6″ inclusive (except 9″ × 7″, 10″ × 8″, 12″ × 8″ and 14″ × 8″) (over one ton)	£38/-/-	per ton
Extras—9″ × 7″ section	5/-	do.
4″ × 4″, 5″ × 3″, 10″ × 8″, 12″ × 8″, 14″ × 8″ and 16″ × 8″ to 20″ × 7½″ sections inclusive	10/-	do.
22″ × 7″ section	15/-	do.
4″ × 2½″, 4″ × 3″, and 24″ × 7½″ sections	20/-	do.
Steel angles and tees	£40/-/-	do.
Steel bars	£38/-/-	do.
Mild steel rods ⅜″ diameter and upwards, cut to lengths within the usual margin and bent to normal schedules for reinforcement	49/-	per cwt
Extras per ton		
⅞in and ¼in diameter in size	27/-	per ton
7/16in do. do.	27/-	do.
½in do. do.	34/6	do.
⅝in do. do.	42/-	do.
¼in do. do.	72/-	do.
1/16in do. do.	102/-	do.
Extras for length		
5ft to 3ft	7/6	do.
3ft to 2ft	15/-	do.
2ft	22/6	do.
40ft to 45ft	15/-	do.
45ft to 50ft	22/6	do.
Bolts and nuts	80/-	per cwt
Trench covering, including trays 1¼in. deep and rebated frames, 9in wide	19/9	foot run
Do., but 12in wide	21/9	do.
Do., but 14in wide	23/-	do.
Do., but 18in wide	30/-	do.

METAL SUNDRIES

Cast iron pavement light filled with 4in × 3in glass lenses	38/-	per ft. super
¼in wrought iron plate door in four panels with stiles and rails on both sides	40/-	do.
20 gauge galvanized iron trunking and straps	4/-	do.
24 gauge galvanized Tallboy 6ft. high 9in diameter with 9in × 12in base	45/-	each.

CHAIN LINK FENCING—

In 25 yards lineal rolls inclusive of line wire.

2in mesh.	Height in inches— 36	42	48	60	72
10½ wire gauge	86/3	100/6	115/-	143/6	172/3
12½ do.	60/9	70/9	80/9	101/-	121/3
14½ do.	43/3	50/6	57/9	72/3	86/9

DOUBLE SOOT DOORS AND FRAMES—

Fitted with brass turnbuckle and cast key	9in × 9in	12in × 9in	14in × 12in
	17/3	25/-	42/9

SLIDING DOORS, GATES AND PARTITIONS—

Factory sliding doors in two leaves containing about 100 square feet with mild steel angle frames covered with 24 gauge corrugated galvanized sheeting and including hanging tubular track and gear complete	13/6	foot super
Factory entrance gates with mild steel frames clad with 2in mesh chain link complete	10/6	do.
Steel partioning, glazed (rough cast) and stove enamelled	16/-	do.

STEEL ROOF LIGHTS—

Lanterns with vertical sides, and hipped roof, glazed with ¼in cast glass and lead flashed.	16/-	foot super
Skylights of similar construction (180ft super)	15/-	do.

HIGH GRADE DOMESTIC BOILERS

Coke fed. Performance 20 to 40 gallons raised from 40°F to 140°F per hour as under.

TYPE		£	s	d
20 gallons per hour 15in wide, 23in high.	Plain cast iron black finish	7	3	3
	Ditto, in cream mottle finish including side jackets	10	3	6
25 gallons per hour 19in wide, 22in high	In cast iron as before and base plate	10	13	6
	Ditto in cream mottle with side jackets and base	15	13	9
40 gallons per hour 22in wide, 23in high	In cast iron, etc. as last ditto	16	18	6
	Ditto in cream mottle all as last ditto	22	18	0

GAS, WATER AND STEAM TUBES

(From Standard List.)

Internal Diameter—	¼in & ⅜in	½in	¾in	1in	1¼in	1½in	2in
Tubes per ft	4*d*	4½*d*	5½*d*	6½*d*	9½*d*	1/1	1/4½	1/10
Bends each	8*d*	9*d*	11*d*	1/2	1/7½	2/7½	3/2	5/2
Elbows, sq. do.	10*d*	11*d*	1/1	1/3	1/6	2/2	2/7	4/3
Do., round do.	11*d*	1/-	1/2	1/5	1/8	2/4	2/10	4/8
Tees do.	1/-	1/1	1/3	1/7	1/10	2/6	3/1	5/1
Crosses do.	2/2	2/4	2/9	3/3	4/1	5/6	6/7	10/6
Backnuts do.	2*d*	2*d*	3*d*	3½*d*	5*d*	6*d*	8*d*	1/1
Sockets do.	3*d*	3*d*	4*d*	5*d*	6*d*	8*d*	10½*d*	1/3
Sockets, dimin. do.	4*d*	5*d*	6*d*	7*d*	9*d*	1/-	1/4	2/-

PERCENTAGES ON OR OFF ABOVE

In quantity and in random lengths.

TUBE—				
Class A (light)	—20%	Black	+6%	Galvanized
Class B (medium)	—10%	Do.	+10%	Do.
Class C (heavy)	+2½%	Do.	+27½%	Do.
FITTINGS				
Lightweight	+12½%	Black	+23½%	Galvanized
Heavy	+19%	Black	+32½%	Do.

RAINWATER GOODS (Painted or Unpainted)

In consignments of 3 cwt and over.

From Standard List.

Pipe:		2in	3in	4in	5in	6in
6ft lengths	each	10/8	12/6	16/5	21/5	27/5
3ft do.	do.	5/10	6/9	8/8	11/4½	14/4½
Shoe, ordinary	do.	2/3	3/4	4/10	8/2	11/3
Bend	do.	2/8	3/9	5/5	9/9	12/8
Branch, single	do.	3/11	5/9	8/-	12/8	19/8
Offset, 4½in	do.	3/3	4/7	6/9	11/3	14/9
Do. 9in	do.	4/3	5/8	8/5	13/3	16/9
H.R. gutter, 6ft length	do.	—	5/3	7/4	9/-	12/-
Angle or nozzle	do.	—	2/2	2/8	3/3	4/8
Stop end	do.	—	8*d*	11*d*	1/4	1/6

Rainwater goods *plus* 7½% at foot of invoice.

CURRENT MARKET PRICES *(Continued)*

PLASTERING MATERIALS

Sand, lime, cement and various plasters are previously included under those heads—

Metal lathing (⅜″×24G.) (20 yds.)		3/2	sq yard
Plaster baseboard, ⅜″ (600 yards)		2/3	do.
Lath nails, galvanized		1/1	lb
White glazed tiles (6″×6″×¼″)	small quantity	17/3	sq yard
Do. rounded on one edge	small quantity	20/9	do.
Do. on two adjoining edges	small quantity	25/6	do.

PLUMBER'S GOODS

4 lb lead sheet (in 1-ton lots)	128/6 per cwt
Lead water pipe in coils (do.)	129/9 do.
Plumber's solder	3/1 lb.
Copper tacks	5/6 do.

IRON SOIL AND WASTE PIPE. (Standard List)

each	2in.	3in	3½in	4in
⅛in Medium pipe, 6ft lengths	12/7	14/11	16/9	19/1
Ditto, 4ft length	9/0½	10/7½	11/10	13/4½
Bends	4/8	5/8	7/–	7/11
Ditto, with oval door	15/2	16/2	18/3	19/2
Junction, single	5/8	8/5	9/9	11/6
Ditto, with oval door	16/2	18/11	21/–	22/6
Swan necks, 4½in	5/8	8/11	10/3	11/11
Ditto, 9in	7/6	10/3	11/11	14/–
Holderbat, 2½in projection	4/8	4/10	5/1	5/2

All *plus* 7½% added at foot of invoice

GALVANIZED CISTERNS, TANKS AND CYLINDERS—(Less than four)

each	gallons			
CISTERNS— Bends over tops and corner plates. Riveted or welded	Nominal capacity			
	100	150	200	300
14 gauge	144/–	197/–	239/–	342/–
12 ditto	167/–	212/–	263/–	467/–
¼in plate	199/–	250/–	300/–	420/–
HOT WATER TANKS— Riveted and with handhole and ring.	20	25	30	40
12 gauge	100/–	111/–	121/–	144/–
¼in plate	110/–	121/–	131/–	161/–
HOT WATER CYLINDERS— Riveted, with handhole and ring.	20	25	33	39
12 gauge	127/–	141/–	153/–	164 –
¼in plate	142/–	157/–	173/–	184/–

PLUMBER'S BRASSWORK, etc.

	Each			
	½in	¾in	1in	1¼in
Boiler screws, single nut	1/5	1/10	2/9	4/6
Ditto double nut	1/10	2/6	4/3	6/3
Cap and lining	1/–	1/6	2/–	2/3
Plumber's unions	2/3	3/–	4/–	6/6
Ball valves, screwed iron	11/6	19/6	—	—
Ditto, fly nut and union	13/–	22/–	—	—
Bib valves, crutch top screwed iron	8/–	12/–	—	—
Ditto, but screwed boss	10/6	13/6	—	—
Stop valves, screwed iron	7/6	10/6	—	—
Ditto, screwed iron and union	8/9	13/–	23/6	—
Ditto, double union	9/9	15/9	26/–	—
Waste, plug chain and stay	—	—	6/–	6/6
	1¼in	1½in	2in	4in
Caps and screws	2/9	3/–	5/–	—
Sleeves, long	—	—	6/9	11/–
Ditto, short	—	3/2	4/3	6/9
Thimble	—	4/–	5/–	10/7
Full way gate valves, hot pressed	17/6	24/3	—	—
		1¼in	1½in	2in
Lead 7 lb. P. trap		6/2	8/1	11/5
Ditto, S. trap		7/8	10/–	14/1
Lead 6 lb. P. traps with 3in seal		6/11	8/4	—
Ditto, but S traps ditto		8/7	10/6	—

Wire ballon guards, copper, 2in 3/-; 4in 3/10.
Ditto, galvanized iron, 2in 1/9; 4in 2/–.
Hair felt, 34in × 20in, 24 oz., 6/– sheet.
Boss white jointing compound, 2/– lb.
Gaskin, 1/5½ lb. Hemp, 9/3 lb.

COPPER TUBES—Extract from B.S. 659/1944—Internal work (semi hard).

Nominal bore	Outside diameter inch	Gauge	Weight lb per ft	3 Cwts lots Price per lb pence	Price per ft pence
½in	0·596	19	0·27	38⅜	10·29
¾in	0·846	19	0·39	36⅞	14·39
1in	1·112	18	0·62	35⅛	21·94
1¼in	1·362	18	0·76	34⅞	26·43
1½in	1·612	18	0·91	34⅞	31·34
2in	2·128	17	1·40	36⅜	50·93

CAPILLARY TYPE CONNECTIONS—All ends copper to copper.

Each	½in	¾in	1in	1¼in	1½in	2in
Straight	1/8	2/4	3/8	4/10	6/6	9/4
Bends	4/4	5/4	7/8	10/6	16/6	23/2
Tees	4/–	4/8	7/6	11/–	15/8	23/2
Brackets (Brass)	2/1	2/3	2/6	—	—	—

GLASS

	Per foot superficial 24 oz.	26 oz.	32 oz.
English, flat drawn sheet glass cut to size: in squares	7½d.	9½d.	1/–
Figured rolled and cathedral, white, cut to sizes, in squares (⅛in)	9d.	Per foot super	
Ditto, but in standard tints	1/4½	Do.	
⅛in Rolled, cut to size, in squares	9d.	Do.	
¼in or ⅜in. Rough cast ditto	1/–	Do.	
¼in Ditto wired ditto	1/2	Do.	
Georgian wired ditto	1/2½	Do.	
Fluted (No. 4) ditto	1/1½	Do.	
Reeded (narrow, broad, cross and major) ditto	1/1	Do.	
Reedlyte (narrow and broad) ditto	1/1	Do.	
Spotlyte ditto	1/1	Do.	
¼in Calorexficast ditto	1/2½	Do.	

	Each 5½″×5½″	7½″×7½″
3⅞in hollow glass light diffusing blocks	2/9	4/2
Ditto corner blocks	5/3	6/9

POLISHED PLATE GLASS. (Tariff). Cut to sizes. Ordinary substance approximately ¼in thick.

Per superficial foot.	Qualities General Glazing	Selected Glazing	Silvering
In plates not exceeding:			
2ft super in each	3/7	4/3	5/1
5ft ditto	4/5	5/2	6/2
45ft ditto (unless extra sizes)	5/1	5/9	6/11
100ft ditto (ditto)	5/6	6/9	8/10

Extra sizes, i.e., Plates exceeding 100ft super or 96in high or 160in wide at higher prices.

DECORATING MATERIAL

	Price	Unit
Aluminium Paint	37/6	Gallon
Distemper, ceiling	33/9	Cwt.
Distemper, washable	120/–	do.
Enamel	65/–	Gallon
Gold Metallic Paint	86/6	do.
Heat Resisting Paint	50/–	do.
Japan, black	23/6	do.
Knotting	30/–	do.
Linseed Oil	14/–	do.
Boiled, ditto.	14/6	do.
Proprietary Paints (good class)—		
Finishing	57/6	do.
Priming	53/–	do.
Undercoat	55/–	do.
Paperhanger's Paste	34/6	Cwt.
Petrifying liquid	8/6	Gallon
Putty	50/–	Cwt.
Size	9/3	Firkin
Terebine	16/–	Gallon
Turpentine substitute	6/3	do.
Varnish, oak, copal, inside use	33/–	do.
Ditto, ditto, outside use	38/–	do.
Ditto, white, eggshell, flat	44/6	do.
White lead mixed paint	58/–	do.
White lead	162/–	Cwt.
Whiting	12/6	Cwt.

CONTRACT • NEWS •

Notes below give basic data of contracts open under locality and authority which are in bold type. References indicate : (a) type of work, (b) address for application. Where no town is stated in the address it is the same as the locality given in the heading, (c) deposit, (d) last date for application, (e) last date and time for submission of tenders. Full details of contracts marked ★ are given in the advertisement section.

OPEN

BUILDING

BEDDINGTON AND WALLINGTON B.C. (a) Block of 9 2-storey flats, "Marlescroft Court," Croydon Road. (b) Borough Surveyor, Town Hall, Wallington. (d) Feb. 1.

* * *

BEXLEY B.C. (a) 74 dwellings, Wickham Street/Chaucer Road, Welling. (b) Borough Engineer, West Lodge, Broadway, Bexleyheath. (c) 5gns. (e) Feb. 12.

* * *

BIRMINGHAM C.C. (a) 2 houses, Bromford Lane, Erdington; 4 2-storey flats, Shaftmoor Lane, Hall Green. (b) City Architect, Civic Centre, 1. (c) 2gns each contract. (d) Feb. 1. (e) Mar. 1.

* * *

BOOTLE B.C. (a) County (Mixed) Secondary Modern School, Glovers Lane, Netherton. (b) Borough Surveyor, Town Hall. (c) 2gns. (e) Feb. 11.

* * *

BRIGHTON B.C. (a) 6-classroom and lavatory extension to Woodingdean Primary School. (b) Borough Engineer, 26-30, King's Road. (c) 3gns. (e) Feb. 15.

* * *

BRIGHTON B.C. (a) Conversion of and additions to 3, 4, 5, Vernon Gardens, and 24, Windlesham Road, into home for aged people. (b) Borough Engineer, 26-30, King's Road. (c) 2gns. (e) Feb. 6.

* * *

BUCKFASTLEIGH U.C. (a) 12 houses, Tweenaways. (b) Messrs. Grant and Green, 10, High Street, Totnes. (c) 2gns. (e) Feb. 22.

* * *

CATERHAM AND WARLINGHAM U.C. (a) 14 houses, Hamsey Green Estate, Warlingham. (b) Engineer and Surveyor, Council Offices, Caterham. (c) 2gns. (e) Feb. 11.

* * *

CANVEY ISLAND U.C. (a) 3 blocks of 3 bungalows, etc. (b) Engineer and Surveyor, Council Offices. (c) 2gns. (e) Feb. 6.

* * *

CANVEY ISLAND U.C. (a) 4 pairs of bungalows, etc. (b) Engineer and Surveyor, Council Offices. (c) 2gns. (e) Feb. 6.

* * *

CANVEY ISLAND U.C. (a) 6 pairs of bungalows, Leigh Beck site (1st portion). (b) Engineer and Surveyor, Council Offices. (c) 2gns. (e) Feb. 6.

* * *

CHERTSEY U.C. (a) 44 houses, Fernlands Drive. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) Feb. 15.

* * *

CHERTSEY U.C. (a) Workshop at the Compressor Station, Pyrcroft Road. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) Feb. 5.

* * *

CHESTERFIELD B.C. (a) Block of 15 aged persons' bungalows, with community meeting room, Pevensey Estate, Newbold. (b) Borough Engineer, Town Hall. (c) 2gns. (e) Feb. 5.

* * *

COVENTRY C.C. (a) Joint maternity and child welfare and school medical clinic, Jardine Crescent, Tile Hill. (b) City Architect, Bull Yard. (c) 2gns. (d) Feb. 1. (e) Mar. 1.

DERBYSHIRE C.C. (a) Art room and 2 classrooms, etc., Hollingwood Secondary Girls' School, Staveley. (b) County Architect, Council Offices, St. Mary's Gate, Derby. (c) 2gns.

* * *

DEWSBURY B.C. (a) Pair of houses and shops, Thornhill Estate. (All trades.) (b) Borough Architect, Town Hall. (e) Feb. 9.

* * *

ESHER U.C. (a) Garage accommodation, Cobham. (b) Engineer and Surveyor, Council Offices. (c) 1gn. (e) Feb. 5.

* * *

FAVERSHAM B.C. (a) 22 houses. (b) Borough Surveyor, Municipal Offices. (c) 2gns. (e) Feb. 9.

* * *

HOLLAND C.C. (a) Kirton Secondary Modern School. (b) County Architect, County Hall, Boston, Lincs. (d) Feb. 1.

* * *

ISLE OF ELY C.C. (a) Girls' high school, Downham Road site, Ely. (b) County Architect, County Hall, March. (c) 4gns., cheque payable to Council. (d) Feb. 3. (e) Feb. 26.

* * *

LEAMINGTON SPA B.C. (a) Block of 4 flats, Lillington Estate. (b) Messrs. Rayner and Fedeski, 28, The Parade. (c) 2gns.

* * *

LEEDS C.C. (a) Public convenience, Oakwood Junction, Roundhay. (b) City Architect, Priestley House, Quarry Hill, 9. (c) 2gns. (e) Feb. 15.

* * *

LINDSEY C.C. (a) First instalment of secondary modern school, Humberston Road, Cleethorpes. (b) County Architect, County Offices, Lincoln. (e) Mar. 1.

* * *

LINDSEY C.C. (a) First instalment of 3-F.E. secondary modern school, High Holme Road, Louth. (b) County Architect, County Offices, Lincoln. (e) Mar. 1.

* * *

LONDON—HAMPSTEAD B.C. (a) 7 houses, Kemplay Road, N.W.3. (b) Town Clerk, Town Hall, Haverstock Hill, N.W.3. (d) Feb. 1; with statement of work carried out.

* * *

LONDON—LEYTON B.C. (a) 8 dressing rooms and a cafe, Lea Bridge Road, E.10. (b) Borough Engineer, Town Hall, E.10. (c) £2. (d) Feb. 1.

* * *

LONDON—ST. MARYLEBONE B.C. (a) Small block of flats. (b) Housing Director, 128-134, Baker Street, W.1. (e) Feb. 8.

* * *

LONDON — SOUTHWARK DIOCESAN BOARD OF EDUCATION. (a) First portion of a secondary school for 450 girls, Carlton Road, Reigate, Surrey. (b) Messrs. Slater, Uren and Pike, 29, Gower Street, W.C.1. (d) Feb. 8.

* * *

LONDON—STEPNEY B.C. (a) 3-storey block of 6 flats and 6 maisonettes, Cephas Street. (b) Borough Engineer, 227-233, Commercial Road, E.1. (d) 5gns. (e) Feb. 15.

* * *

LONDON—WALTHAMSTOW B.C. (a) 6 flats at 34-41, First Avenue, E.17. (b) Borough Architect, Town Hall, E.17. (c) 2gns. (e) Feb. 8.

* * *

MANCHESTER C.C. (a) Plant Hill Secondary School for Boys, Blackley. (b) City Architect, Town Hall. (c) 1gn. (e) Feb. 10.

MERIONETH C.C. (a) Secondary school at Harlech for 620 pupils. (b) Messrs. Richards and Trollope, 14, Sackville Street, London, W.1. (c) 3gns. (e) Feb. 23.

* * *

MONMOUTHSHIRE C.C. (a) College of Further Education, Pontypool. (b) County Architect, Queen's Hill, Newport. (c) 5gns. (e) Feb. 15.

* * *

NEWCASTLE-UPON-TYNE C.C. (a) Primary school at North Fawdon, for 280 pupils. (b) City Architect, 18, Cloth Market, 1; immediately. (c) 2gns. (e) Mar. 1.

* * *

N. IRELAND—BELFAST. (a) Factory on site 12, Carnmoney Factory Estate. (b) Ministry of Commerce, (Room 28) Chichester House, Chichester Street. (c) £10. (e) Feb. 12.

* * *

NORTHUMBERLAND C.C. (a) New wing to Nicholas Garrow Home for the Blind, Hepscott Manor, Morpeth. (b) County Architect, County Hall, Newcastle-upon-Tyne. (c) 2gns. (d) Feb. 1.

* * *

PENGE U.C. (a) 34 dwellings on seven sites in district. (b) Engineer and Surveyor, Town Hall, Anerley Road, S.E.20. (c) 2gns. (e) Feb. 20.

* * *

PORTSMOUTH C.C. (a) 40 flats and maisonettes, Hanover and Havant Streets. (b) P. McG. Corsar, Westminster Bank Chambers, 103, Commercial Road. (c) 3gns. (d) Feb. 6.

* * *

PRESTON B.C. (a) Structural alterations and extensions at Deepdale County Primary School. (b) Borough Engineer, Municipal Building. (c) 2gns. (e) Feb. 22.

* * *

ROCHDALE B.C. (a) Canteen at Ann Street for St. John's R.C. School. (b) Borough Surveyor, Town Hall. (e) Feb. 15.

* * *

SALFORD C.C. (a) 2 additional classrooms, Tootal Drive School. (b) City Engineer, Town Hall. (c) 1gn. (e) Feb. 9.

* * *

SCOTLAND—GALASHIELS. (a) 50 houses, Wester Langlee, Galashiels. (b) Scottish Special Housing Association, Ltd., 15-21, Palmerston Place, Edinburgh, 12.

* * *

SHEFFIELD C.C. (a) 144 dwellings, Greenhill Estate—Scheme 5. (b) City Architect, Town Hall, 1. (c) £2. (e) Feb. 15.

* * *

SHEFFIELD C.C. (a) Superstructure for first stage of Colleges of Technology and Commerce, Pond Street. (b) City Architect, Town Hall, 1. (c) £5. (e) Feb. 12.

* * *

SMETHWICK B.C. (a) Building extensions to Holly Lodge Girls' Grammar School. (b) Chief Education Officer, Education Offices, 215, High Street. (c) 2gns.

* * *

SOUTH WESTERN REGIONAL HOSPITAL BOARD. (a) Single-storey 54-bedded admission unit at Moorhaven Hospital, Ivybridge, S. Devon. (b) Regional Architect, 27, Tyndalls Park Road, Bristol, 8. (c) 2gns. (d) Jan. 30.

* * *

SOUTH WESTERN REGIONAL HOSPITAL BOARD. (a) 44-bed 2-storey villa at Coney Hill Hospital, Gloucester. (b) Regional Architect, 27, Tyndalls Park Road, Bristol, 8. (c) 2gns.

THEDWASTRE R.C. (a) 12 houses, Woolpit. (b) Messrs. Hunt and Coates, 84, Guildhall Street, Bury St. Edmunds. (c) 3gns. (d) Jan. 30.

* * *

VENTNOR U.C. (a) Pierhead superstructure in traditional building materials. (b) Basil L. Phelps, 82, High Street, Shanklin, I.W. (c) 3gns. (e) Feb. 18.

* * *

WALLASEY B.C. (a) Secondary Technical School, Mosslands Drive. (b) Borough Architect, Town Hall. (c) 2gns. (e) Mar. 3.

* * *

WEST RIDING C.C. (a) 2-bay fire station, Bondgate, Otley. (b) County Architect, "Bishopgarth," Westfield Road, Wakefield. (c) 2gns. (e) Feb. 5.

OFFICIAL APPOINTMENTS • ANNOUNCEMENTS • CONTRACTS • TENDERS

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APPOINTMENTS

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order 1952.

SALOP COUNTY COUNCIL.

COUNTY ARCHITECT'S DEPARTMENT.

APPLICATIONS are invited for the following appointments to the Established Staff:—

1. SENIOR ASSISTANT ARCHITECTS, A.P.T. Grade IX. (£815 to £935 p.a.) Applicants should be Registered Architects, preferably Members of the R.I.B.A., with good experience and a keen appreciation of the design and construction of modern buildings.
2. SENIOR ASSISTANT QUANTITY SURVEYOR, A.P.T. Grade VIII or IX. (£760 to £835 or £815 to £935 p.a.) depending on the qualifications and experience of the successful applicant. Applicants should be Members of the Royal Institution of Chartered Surveyors (Sub-Division III Quantities) and must be thoroughly experienced in the preparation of Bills of Quantities, estimating, interim valuations, final accounts and general contract procedure for large building projects.

It is expected that housing accommodation in the form of a flat will be available in the near future if required by the successful applicant for each of these appointments. Until the flat is available or other accommodation obtained, a separation allowance of not exceeding 30s a week will be paid to a married officer taking up this appointment, together with third-class return railway fare once a month to visit his family, such allowances to be limited to a period of six months or until such time as the officer is able to obtain accommodation for himself and his family in Shropshire, whichever is the earlier.

Application forms and conditions of the appointments may be obtained from the County Architect, C. H. Simmons, A.R.I.B.A., Dip. T.P., Column House, London Road, Shrewsbury, to whom they must be returned, accompanied by copies of three recent testimonials, not later than Friday, 19th February, 1954. [7613

GOVERNMENT OF NORTHERN IRELAND.

ASSISTANT ARCHITECT.

APPLICATIONS are invited for the unestablished post of ASSISTANT ARCHITECT Class II in the Ancient Monuments Branch of the Ministry of Finance.

Salary £675 × £25—£750 × £30—£960 × £40—£1,000. Entry point depends on age. Minimum of scale is linked to age 26, with an increase of one increment for each year above that age, subject to a maximum entry point of £900.

Applicants must be registered Architects. They should have specialised knowledge of the maintenance and presentation of ancient monuments and have had experience in the study and recording of archæological sites and historic buildings. Proficiency in draughtsmanship and photography would be an advantage.

Preference will be given to suitably qualified ex-Servicemen who served in H.M. Forces in the 1914-18 or 1939-45 wars, provided the Ministry is satisfied that such candidates are, or within a reasonable time will be, able to discharge the duties efficiently.

Application forms may be obtained from the Director of Establishments, Ministry of Finance, Stormont, Belfast, to whom they should be returned with copies of two recent testimonials, so as to reach him not later than 15th February, 1954. [7623

ASSISTANT ARCHITECT required in Surveyor's department of METROPOLITAN WATER BOARD with experience in design, preparation of plans and working drawings, specifications and quantities for the erection of houses and offices. Salary scale £778—£27—£832. The selected candidate must be and continue to be an Associate Member of the Royal Institute of British Architects whilst holding the position. Applications stating candidate's age, present position, salary, qualifications, etc., and giving full particulars of experience should be addressed to The Surveyor, New River Head, Rosebery Avenue, E.C.1, endorsed "Assistant Architect," not later than 10 days after appearance of this advertisement. Canvassing disqualifies and relationship to any member, officer or employee must be disclosed. [7617

APPOINTMENTS—contd.

COUNTY BOROUGH OF WEST HAM.

BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT.

APPLICATIONS are invited from Associates R.I.B.A. for post of ASSISTANT ARCHITECT (£670 × £20 × £20 × £25—£735, plus London Allowance). Enthusiasm and experience in Housing and Education Work required. Application forms (returnable by Monday, 15th February, 1954) from the Borough Architect & Planning Officer, Thomas E. North, O.B.E., F.R.I.B.A., Dist. T.P., 70, West Ham Lane, Stratford, E.15. [7620

SKIPTON RURAL DISTRICT COUNCIL.

ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the appointment of an ARCHITECTURAL ASSISTANT in the Engineer and Surveyor's Department at a salary in accordance with Grade V of the A.P. and T. Division of the National Scales (£595-£645 per annum).

Applicants must be able to undertake the design of houses and site layouts, including the preparation of final plans and working drawings, and must be proficient in the complete process of taking off and billing quantities for new housing, measuring up and settling Contractors final accounts. Preference will be given to candidates who have passed the final examination of the R.I.B.A. or its equivalent.

The appointment will be subject to:—

(a) the local Government Superannuation Acts;
(b) the National Scheme of Conditions of Service.
(c) the successful passing of a medical examination; and
(d) one month's notice on either side.

The Council will consider providing housing accommodation, if required.

Applications endorsed "Architectural Assistant," stating age, qualifications, experience, present and previous appointments, together with the names and addresses of two persons to whom reference may be made, should reach the undersigned not later than 10th February, 1954.

S. C. HARWOOD,
Clerk of the Council.

Council Offices,
Granville Street,
Skipton.
19th January, 1954. [7615

BOROUGH OF WORKINGTON.

APPOINTMENT OF ARCHITECTURAL ASSISTANT.

APPLICATIONS are invited for the appointment of an ARCHITECTURAL ASSISTANT in the Borough Surveyor's Department at a salary in accordance with A.P.T. Grades IV (£555—£600) or V (£595—£645) according to qualification.

Applications should be made on forms which can be obtained from the undersigned, and are to be sent in not later than 12th February, 1954.

Housing accommodation will be provided for the successful applicant, if required.

RUSSELL C. PHARAOH,
Town Clerk.

Town Hall,
Workington.
20th January, 1954. [7619

LANARK COUNTY COUNCIL require ARCHITECTURAL ASSISTANTS for the County Property Department at Motherwell on the following salary grades:—

A.P.T. Grade VII (£745/£820)
A.P.T. Grade V (a) (£660/£720).

Must be A.R.I.B.A. and have thorough knowledge of architectural work with practical experience in design and preparation of working drawings.

A.P.T. Grade II (£520/£565).

Must have completed five years pupilage and be conversant with architectural practice up to Intermediate Standard.

Posts superannuable. Medical examination. No canvassing.

Applications, stating age, qualifications, experience, together with names and addresses of three referees, should be sent to the County Architect, 34, Albert Street, Motherwell, Lanarkshire, not later than 13th February, 1954. [7625

APPOINTMENTS—contd.

COUNTY BOROUGH OF GATESHEAD.

BOROUGH ENGINEER'S DEPARTMENT.

APPLICATIONS are invited for the following appointment:—ASSISTANT QUANTITY SURVEYOR: Grade A.P.T. III—£525 × £15 to £570.

Candidates should have passed the Intermediate Examination of the R.I.C.S. and should have a sound knowledge of Quantity Surveying in all its branches, together with experience in Measurement, Abstracting and Billing.

The appointment will be subject to the Local Government Superannuation Act, 1937, and to one month's notice on either side.

The successful candidate will be required to pass a medical examination.

Applications to be made on forms obtainable from G. F. Winters, B.E., A.M.I.C.E., Borough Engineer, Municipal Buildings, Swinburne Street, Gateshead, 8, should be returned not later than Wednesday, 10th February, 1954.

J. W. PORTER,
Town Clerk.

Town Hall,
Gateshead, 8.
16 Jan., 1954. [7616

CONTRACTS

PENGE URBAN DISTRICT COUNCIL.

TENDERS are invited for COMPETITIVE DESIGN and ERECTION of MIXED FLATS, MAISONETTES and possibly HOUSES to an approximate total of 34 dwellings on seven sites dispersed throughout the district, but all within a circumscribing area of approximately one square mile. Tenderers in submitting designs may offer structures in traditional or non-traditional form, but all are to comply with Housing Manual recommendations, bye-law and town planning requirements.

Further particulars, site plans and outline specifications may be obtained on application to the Engineer and Surveyor on payment of a deposit of Two Guineas, returnable only on receipt of bona-fide Tenders and return of all documents.

Tenders, in the envelopes provided, are to be returned to the undersigned on or before 9 a.m. on the 20th FEBRUARY, 1954.

F. B. W. LINNITT,
Clerk of the Council.

Town Hall,
Anerley Road, S.E.20.
18th January, 1954. [7629

MISCELLANEOUS SECTION

RATE: 1/6d. per line, minimum 3/-, average line 6 words. Each paragraph charged separately.
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PRESS DAY Monday. Remittances payable to Iliffe & Sons Ltd., Dorset House, Stamford Street, London, S.E.1.
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ARCHITECTURAL APPOINTMENTS VACANT

The engagement of persons answering these advertisements must be made through the local office of the Ministry of Labour and National Service, etc., if the applicant is a man aged 18-64 or a woman aged 18-59 inclusive, unless he or she or the employer is excepted from the provisions of The Notification of Vacancies Order 1952.

SENIOR Assistant required by London Architects to work on contemporary schemes, capable of controlling working drawing group. Salary £750 per annum.—Box 2739. [7568

SCHOOL trained assistant, especially interested contemporary design and colour, required by established London firm, office experience not essential, model making ability desirable; salary £600-£700 per annum.—Box 3053. [7611

ARCHITECTURAL APPOINTMENTS VACANT—contd.

ARCHITECT'S Office—Assistant required. Intermediate or Final Standard with knowledge and experience domestic work. Particulars to Secretary, Bournville Village Trust, Estate Office, Bournville, Birmingham, 30. [7618

ARCHITECTURAL Assistant required as a senior designer in drawing office of leading prefabricated building manufacturers at their Rochester Works. Quick, neat draughtsman with experience of prefabricated systems and with ability not only to plan but also to design and calculate efficient timber structures. Pension scheme. Send full details of training, experience and capabilities to Box 3116. [7624

SITUATIONS VACANT

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INTERIOR decoration.—Charles Hammond, Ltd., requires a draughtsman with experience and knowledge of interior decoration in the traditional manner.—Apply in writing, 165, Sloane Street, S.W.1. [7614

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ALL Mouldings, Plain and Embossed, and Embossed ornaments. Numerous designs.—Dareve's Moulding Mills, Ltd., 60, Pownall Rd., Dalston, E.8. [0086

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FOR dressed Derbyshire Gritstone for Public Works, Civil Engineering and Housing Schemes, Random and Dimension Blocks.—Write, Twyfords, Stanton-in-Peak, Matlock. Tel. Youlgrave 218. [7605

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FOR sale from stock, FRONT END EQUIPMENTS for Ruston-Bucyrus Excavators:—
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Dragline Equipment for 10R.B., 28ft Boom, ¾-yd Bucket. Completely reconditioned.
CHARLES JONES OF ALDRIDGE, LTD., Birch Lane Works, Aldridge, nr. Birmingham, South Staffs. Tel.: Aldridge 52222. [7578

NEW 5/3½ "Ward" Portable Petrol-driven Concrete Mixers for sale.—Full details from Thos. W. Ward, Ltd., Albion Works, Sheffield. [7622

RAPIER 3½T portable concrete mixer for sale, Petter engine, capacity 5 cu ft unmixed, 3½ cu ft mixed.—F. J. Edwards, Ltd., 359, Euston Rd., N.W.1. Eus 4681. [7612

ONE Pegson Telsmith single-deck screen, 8ft × 4ft, comp. with driving pulley; one spare frame, complete with mesh and 8hp Lister diesel engine; price £235.—S. H. Pickard, 34, Allens Lane, Pelsall, nr. Walsall. [7628

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CHASESIDE mechanical shovels, Major type, by day, week or contract, with drivers; tipping lorries supplied if required with shovels.—Henry Froud, Ltd., Primrose Wharf, Tunnel Ave., Greenwich, S.E.10. Tel. Greenwich 0072-3. [0138

WANTED

WANTED for 10-ton 1931 Aveling-Porter diesel roller, Royalty No. 12646, one engine bed for Blackstone horizontal engine.—South-Eastern Engineering Co., Ltd., West Malling (3041), Kent. [7586

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RECONDITIONED ex-Army huts and manufactured buildings, timber, asbestos, Nissen type, hall type, etc., all sizes and prices.—Write, call or telephone Universal Supplies (Belvedere), Ltd., Dept. 32, Crabtree Manorway, Belvedere, Kent. Tel. Erith 2948. [0120

FOR sale: New fabricated Steel Frame Building, 200ft long × 100ft wide × 16ft high to eaves, in two 50ft wide bays, ridge type roof; complete with all necessary stanchions, roof principals, purlins, sheeting rails, bolts, nuts, etc.—F. Burrill & Co., 109, Pencisely Rd., Llandaff, Cardiff. Tel.: Llandaff 95. [7604

ACCOMMODATION

ASSOCIATE has Leasehold for disposal, Manchester Street, London, W.1, with vacant possession of two floors, one as Office, together about 900 f.s.—Apply Box 3086. [7621

DRAWING office to let. Fully equipped in first-class style, available at rental inclusive of equipment and rates, 10 miles of London in Middlesex, 1,500 sq ft floor space.—Apply sole agents, Goddard & Smith, 22, King Street, St. James's, London, S.W.1. Telephone WHI. 2721 (20 lines). [7626

MISCELLANEOUS

NARROW trench buckets to suit all makes of excavators in any specified cutting widths, and lightweight heavy duty dragline buckets for ¼ to ¾ cu. yd. capacity; sale or hire, quick delivery.—Manufacturers, Nortons Plant Hire, Ramsden, Billericay, Essex. Tel. Ramsden Heath 365. [0137

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By SYD BISHOP & SONS,
282, BARING RD., LEE, S.E.12. TEL. LEE GREEN 7755.
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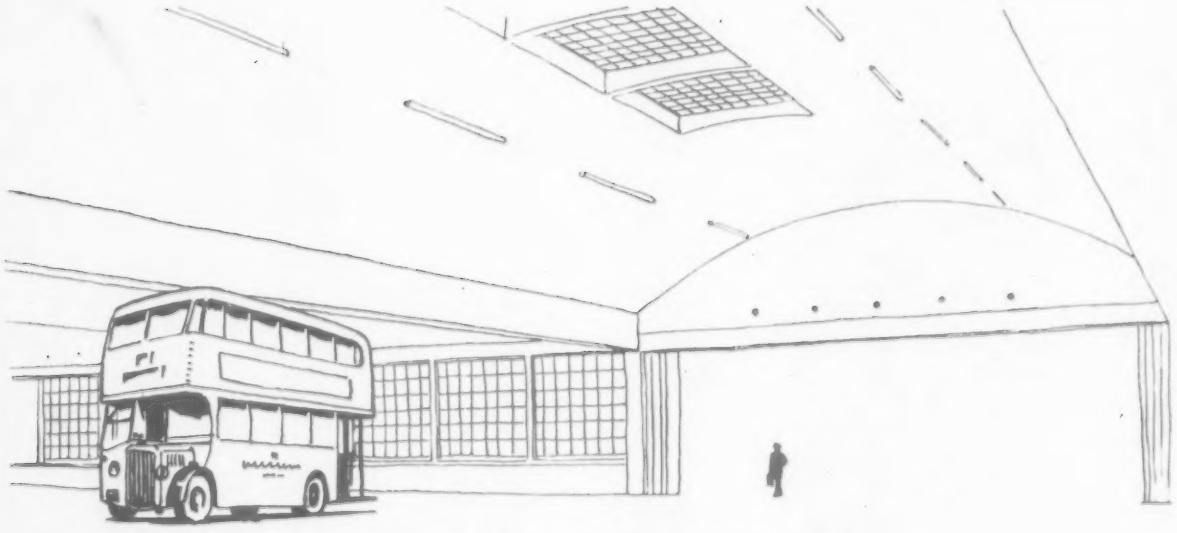

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